FIG. 1

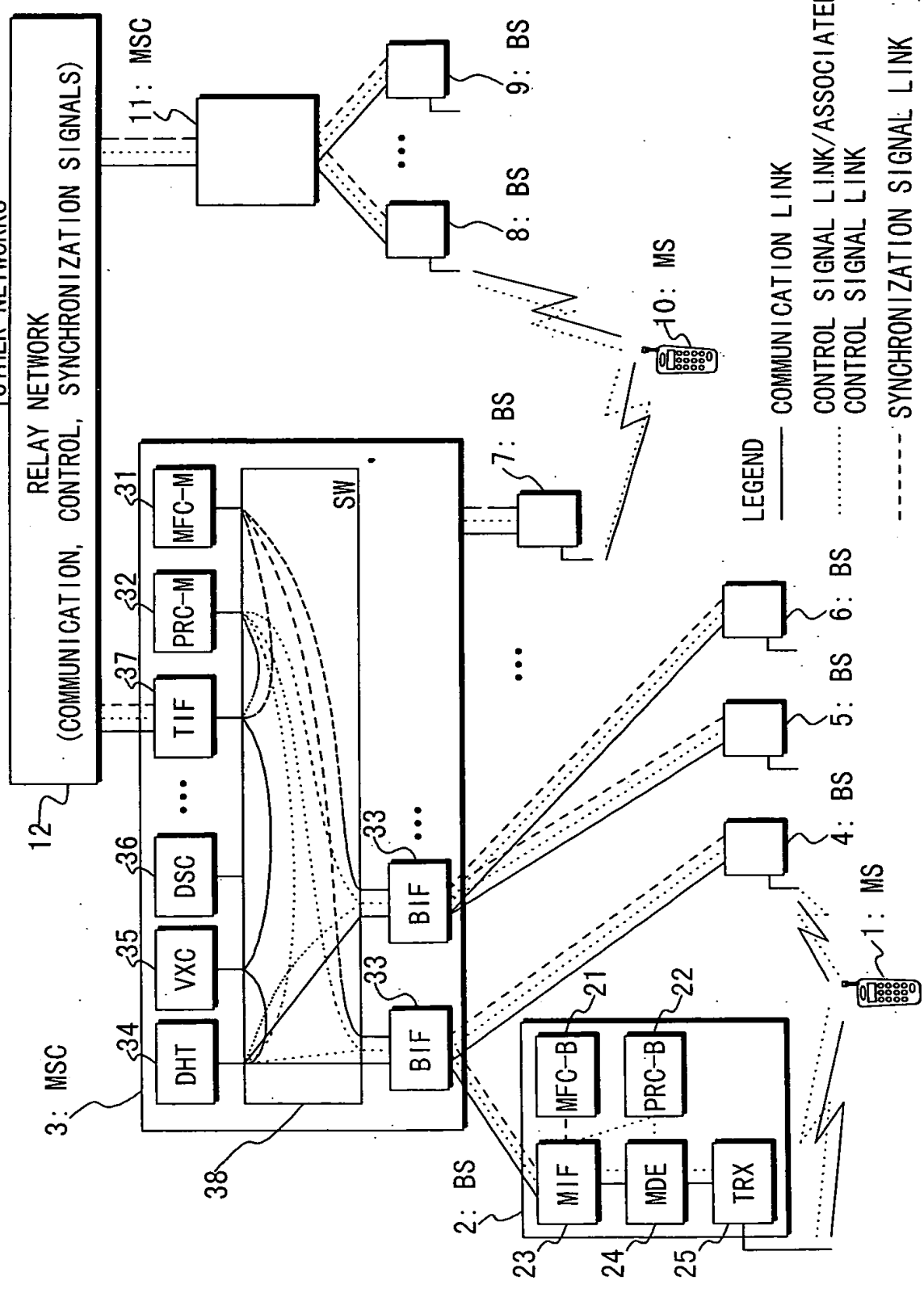

OTHER NETWORKS
RELAY NETWORK
(COMMUNICATION, CONTROL, SYNCHRONIZATION SIGNALS)
12
11: MSC
9: BS
8: BS
10: MS
7: BS
6: BS
5: BS
4: BS
1: MS
3: MSC
38
2: BS
31
MFC-M
32
PRC-M
37
TIF
36
DSC
35
VXC
34
DHT
SW
33
BIF
33
BIF
21
MFC-B
22
PRC-B
23
MIF
24
MDE
25
TRX
LEGEND
COMMUNICATION LINK
CONTROL SIGNAL LINK/ASSOCIATED
CONTROL SIGNAL LINK
SYNCHRONIZATION SIGNAL LINK

FIG. 2

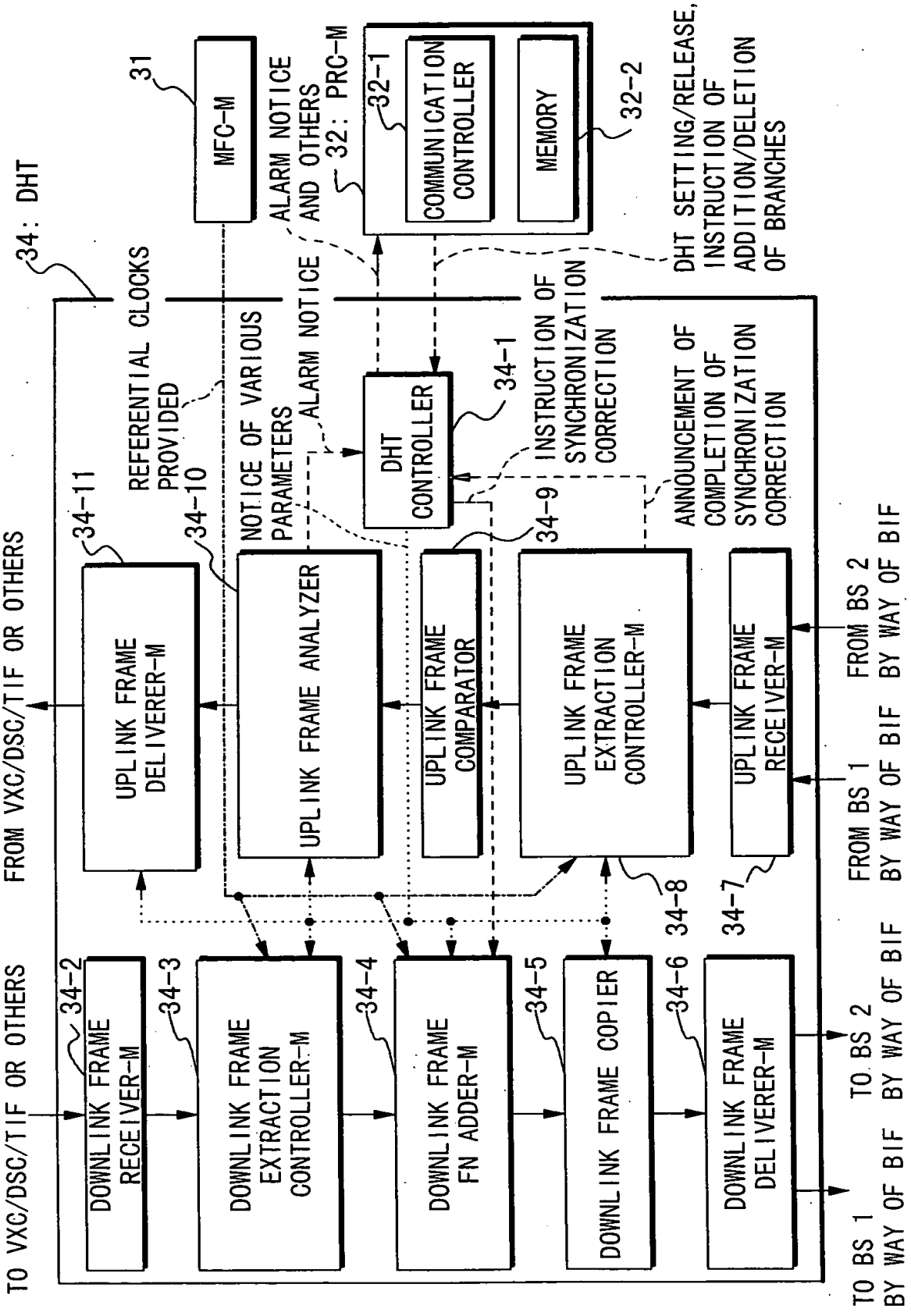

34: DHT
31
MFC-M
ALARM NOTICE AND OTHERS
32: PRC-M
32-1
COMMUNICATION CONTROLLER
MEMORY
32-2
DHT SETTING/RELEASE, INSTRUCTION OF ADDITION/DELETION OF BRANCHES
REFERENTIAL CLOCKS PROVIDED
NOTICE OF VARIOUS PARAMETERS
ALARM NOTICE
DHT CONTROLLER
34-1
INSTRUCTION OF SYNCHRONIZATION CORRECTION
ANNOUNCEMENT OF COMPLETION OF SYNCHRONIZATION CORRECTION
FROM VXC/DSC/TIF OR OTHERS
34-11
UPLINK FRAME DELIVERER-M
34-10
UPLINK FRAME ANALYZER
34-9
UPLINK FRAME COMPARATOR
UPLINK FRAME EXTRACTION CONTROLLER-M
34-8
34-7
UPLINK FRAME RECEIVER-M
FROM BS 1 BY WAY OF BIF
FROM BS 2 BY WAY OF BIF
TO VXC/DSC/TIF OR OTHERS
34-2
DOWNLINK FRAME RECEIVER-M
34-3
DOWNLINK FRAME EXTRACTION CONTROLLER-M
34-4
DOWNLINK FRAME FN ADDER-M
34-5
DOWNLINK FRAME COPIER
34-6
DOWNLINK FRAME DELIVERER-M
TO BS 1 BY WAY OF BIF
TO BS 2 BY WAY OF BIF

FIG. 3

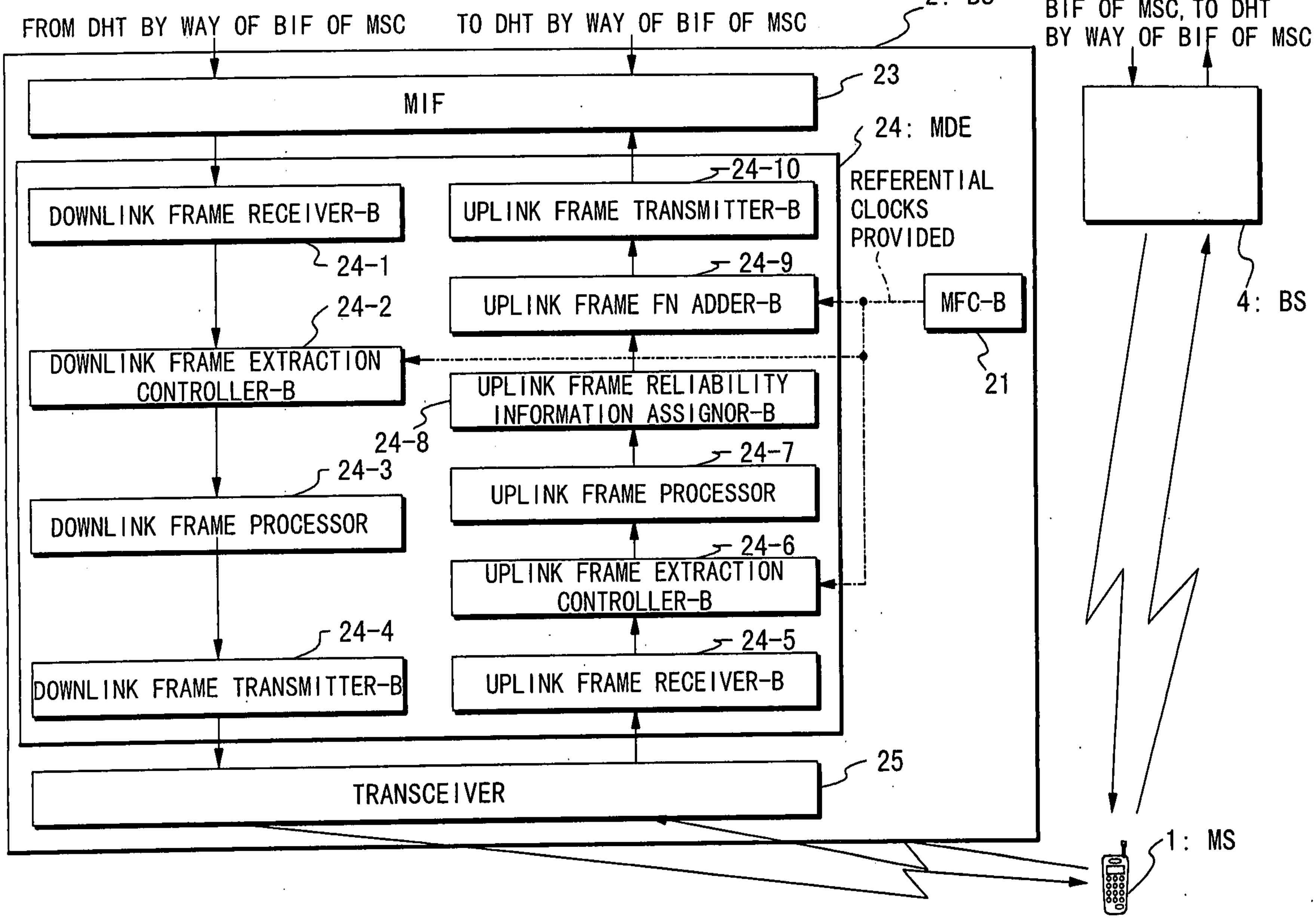

FROM DHT BY WAY OF BIF OF MSC
TO DHT BY WAY OF BIF OF MSC
2: BS
FROM DHT BY WAY OF BIF OF MSC, TO DHT BY WAY OF BIF OF MSC
MIF
23
24: MDE
REFERENTIAL CLOCKS PROVIDED
DOWNLINK FRAME RECEIVER-B
24-1
UPLINK FRAME TRANSMITTER-B
24-10
UPLINK FRAME FN ADDER-B
24-9
MFC-B
21
4: BS
DOWNLINK FRAME EXTRACTION CONTROLLER-B
24-2
UPLINK FRAME RELIABILITY INFORMATION ASSIGNOR-B
24-8
DOWNLINK FRAME PROCESSOR
24-3
UPLINK FRAME PROCESSOR
24-7
UPLINK FRAME EXTRACTION CONTROLLER-B
24-6
DOWNLINK FRAME TRANSMITTER-B
24-4
UPLINK FRAME RECEIVER-B
24-5
TRANSCEIVER
25
1: MS

FIG. 4

CONNECTION MANAGEMENT TABLE

IDENTIFIER / CALL	NUMBER OF DHO BRANCHES	BRANCH ID = 1	BRANCH ID = 2	. . .	BRANCH ID = N			NETWORK SIDE CONNECTION
1	2	VP = 1 VC = 32 CID = 32	VP = 2 VC = 32 CID = 40					VP = 3 VC = 32 CID = 42
2	3	VP = 1 VC = 32 CID = 40	VP = 3 VC = 33 CID = 36	VP = 4 VC = 32 CID = 50				VP = VC = CID =

FIG. 5

MSC-BS TRANSMISSION DELAYS BY SERVICE TYPES MANAGEMENT TABLE (UNIT = ms)

SERVICE TYPE / TARGET BS	(a-1) MS～MSC CONTROL SIGNAL	(a-2) VOICE	(a-3) DATA COMMUNICATION 1	. . .	(a-n) SERVICE n
(b-1) BS 1	80	30	50		
(b-2) BS 2	85	38	55		
|	|	|	|		
(b-n) BS n	75	25	45		
(b-max) MAXIMUM	90	40	60		

FIG. 6

QUALITY DEGRADATION AND OUT-OF-SYNC PARAMETERS

PARAMETER \ SERVICE TYPE		(a-1) MS～MSC LINK FOR AFFILIATED CONTROL SIGNALS	(a-2) VOICE	(a-3) DATA COMMUNICATION 1	...	(a-n) SERVICE n
QUALITY DEGRADATION MEASUREMENT PARAMETER	MEASUREMENT PERIOD (ms)	1000	1000	0		
	THRESHOLD FOR ANNOUNCEMENT REPORT $_{FER}$	10	10	10		
OUT-OF-SYNCHRONIZATION DETECTION PARAMETER	NUMBER OF SUCCESSIVE OUT-OF-SYNC FRAMES REPORT $_{SOUT}$	2	2	2		

FIG. 7

TRAFFIC INFORMATION TABLE

SERVICE TYPE / TRAFFIC INFORMATION	(a-1) MS～MSC CONTROL SIGNAL	(a-2) VOICE	(a-3) DATA COMMUNICATION 1	. . .	(a-n) SERVICE n
CELL INTERVAL (ms)	40	10	10		
NUMBER OF CELLS	VARIABLE	1	3		

FIG. 8

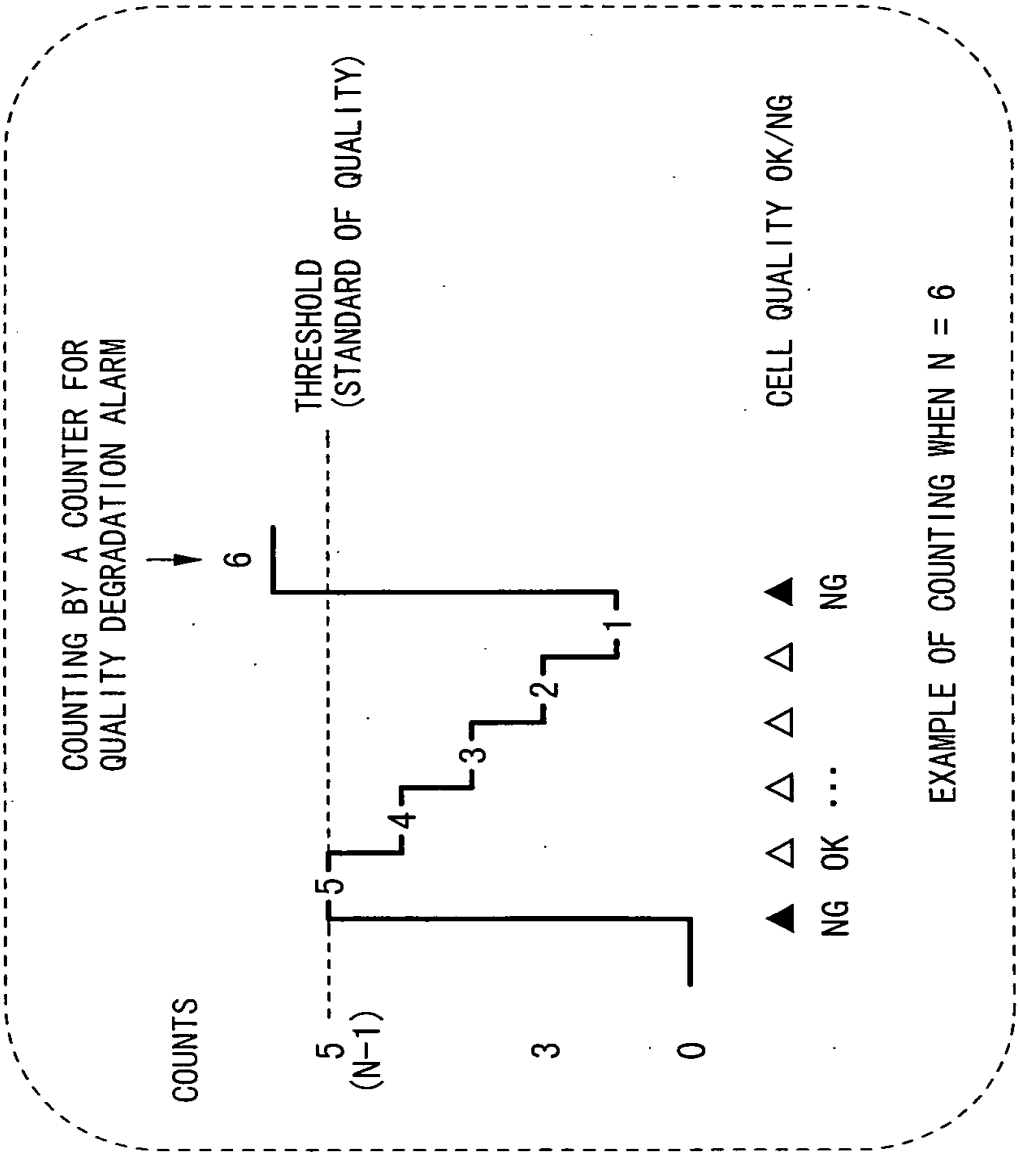

COUNTING BY A COUNTER FOR QUALITY DEGRADATION ALARM
6
THRESHOLD (STANDARD OF QUALITY)
5 (N-1)
3
0
5
4
3
2
1
COUNTS
CELL QUALITY OK/NG
▲ △ △ △ △ ▲
NG OK ··· NG
EXAMPLE OF COUNTING WHEN N = 6

FIG. 9

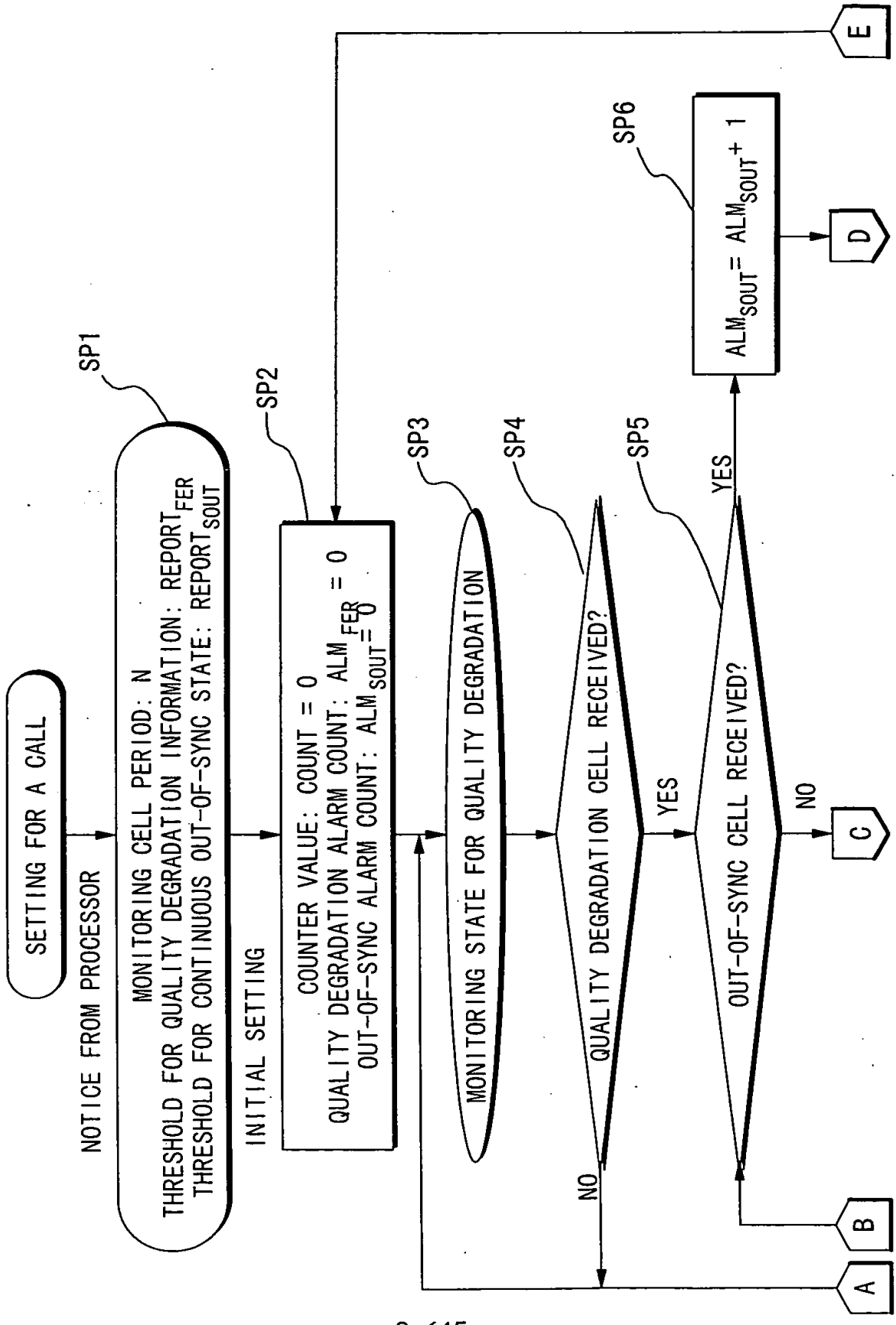

SETTING FOR A CALL
NOTICE FROM PROCESSOR
SP1
MONITORING CELL PERIOD: N
THRESHOLD FOR QUALITY DEGRADATION INFORMATION: REPORT$_{FER}$
THRESHOLD FOR CONTINUOUS OUT-OF-SYNC STATE: REPORT$_{SOUT}$
INITIAL SETTING
SP2
COUNTER VALUE: COUNT = 0
QUALITY DEGRADATION ALARM COUNT: ALM$_{FER}$ = 0
OUT-OF-SYNC ALARM COUNT: ALM$_{SOUT}$ = 0
SP3
MONITORING STATE FOR QUALITY DEGRADATION
SP4
QUALITY DEGRADATION CELL RECEIVED?
NO
YES
SP5
OUT-OF-SYNC CELL RECEIVED?
YES
NO
SP6
ALM$_{SOUT}$ = ALM$_{SOUT}$ + 1
A
B
C
D
E

FIG. 10

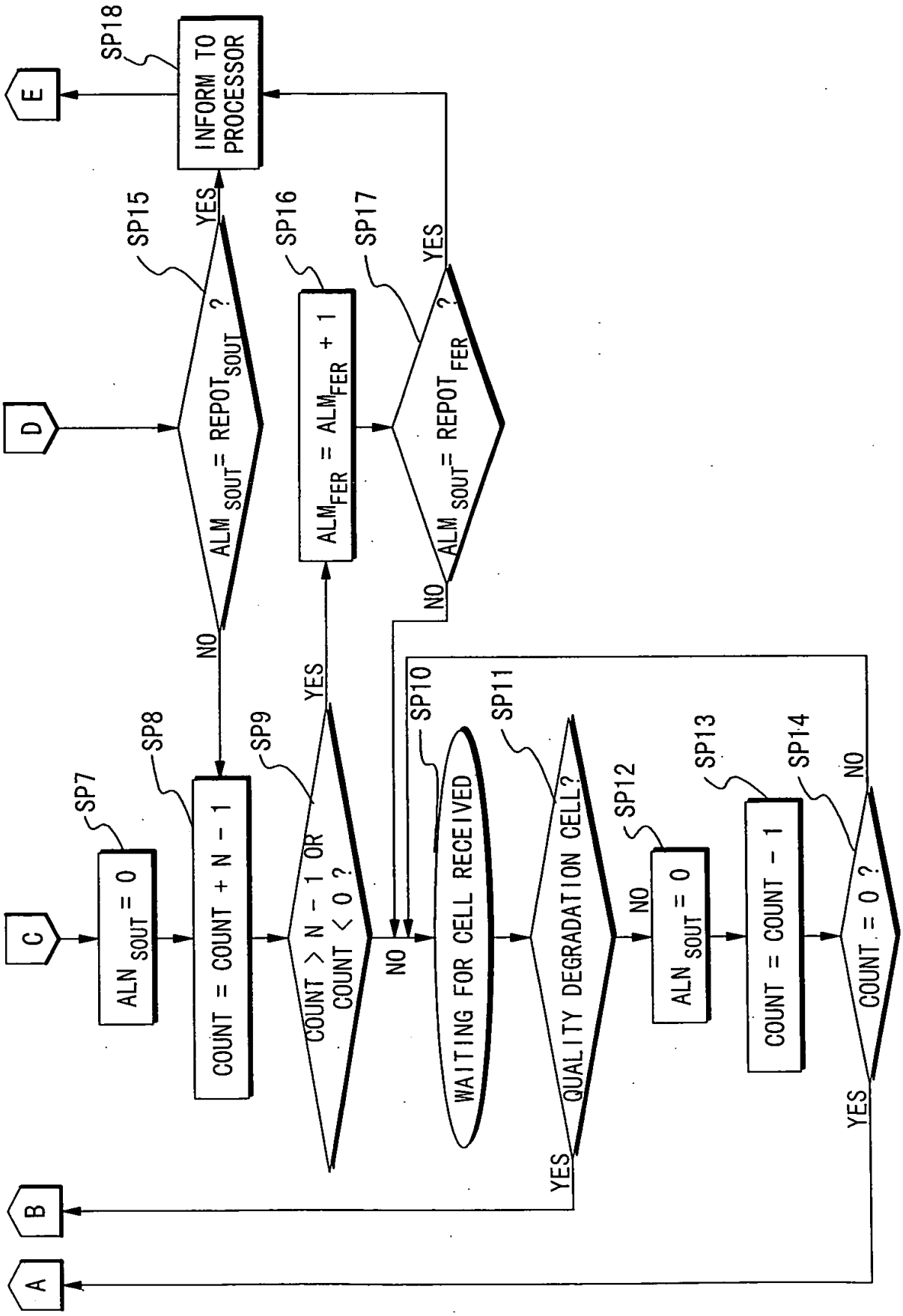

A
B
C
D
E
SP7
ALN SOUT = 0
SP8
COUNT = COUNT + N - 1
SP9
COUNT > N - 1 OR COUNT < 0 ?
YES
NO
SP10
WAITING FOR CELL RECEIVED
SP11
QUALITY DEGRADATION CELL?
YES
NO
SP12
ALN SOUT = 0
SP13
COUNT = COUNT - 1
SP14
COUNT = 0 ?
YES
NO
SP15
ALM SOUT = REPOT SOUT ?
YES
NO
SP16
ALM FER = ALM FER + 1
SP17
ALM SOUT = REPOT FER ?
YES
NO
SP18
INFORM TO PROCESSOR

FIG. 11

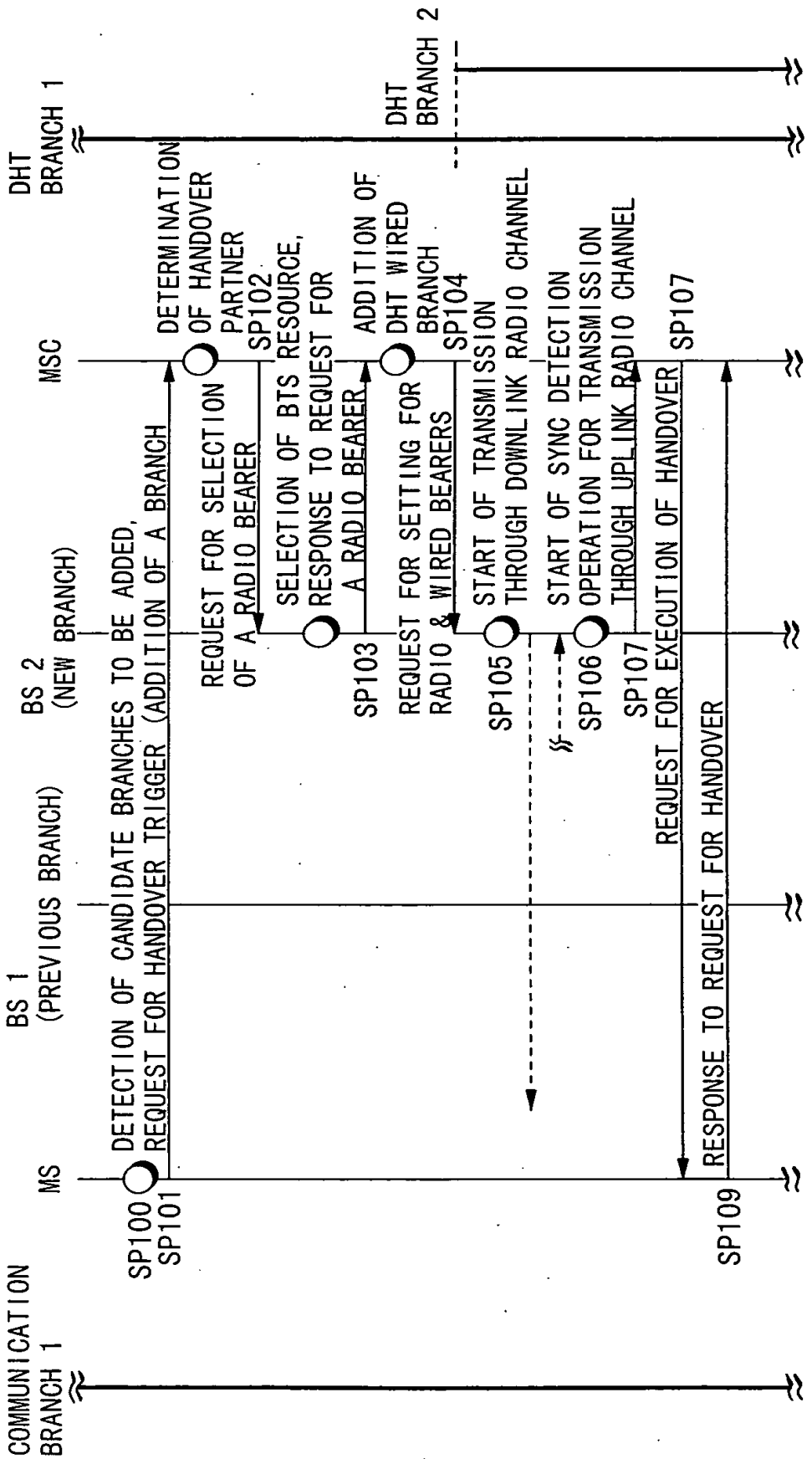


FIG. 12

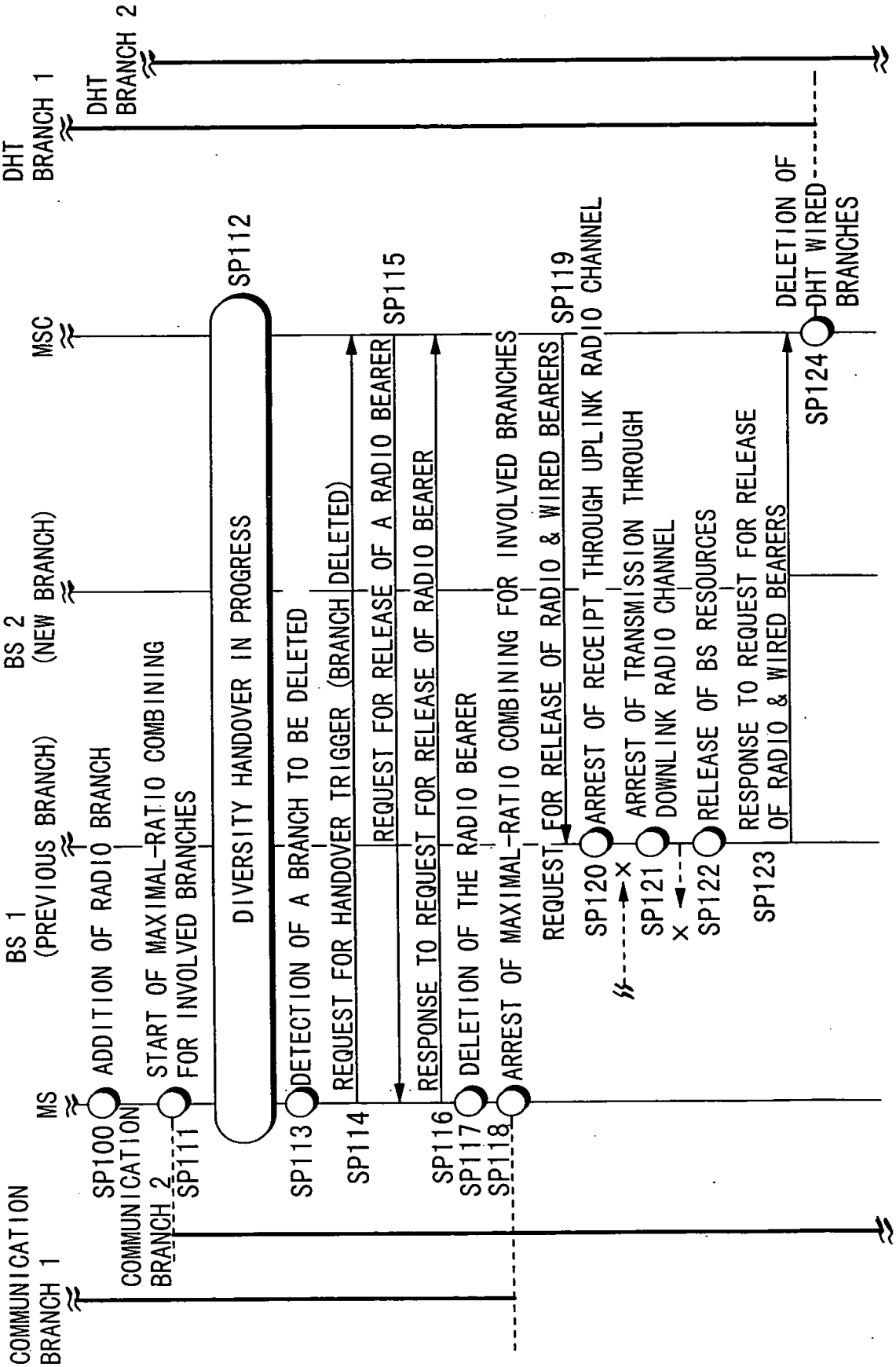

COMMUNICATION BRANCH 1
MS
BS 1 (PREVIOUS BRANCH)
BS 2 (NEW BRANCH)
MSC
DHT BRANCH 1
DHT BRANCH 2
SP100 ADDITION OF RADIO BRANCH
COMMUNICATION BRANCH 2
SP111 START OF MAXIMAL-RATIO COMBINING FOR INVOLVED BRANCHES
SP112 DIVERSITY HANDOVER IN PROGRESS
SP113 DETECTION OF A BRANCH TO BE DELETED
SP114 REQUEST FOR HANDOVER TRIGGER (BRANCH DELETED)
SP115 REQUEST FOR RELEASE OF A RADIO BEARER
SP116 RESPONSE TO REQUEST FOR RELEASE OF RADIO BEARER
SP117 DELETION OF THE RADIO BEARER
SP118 ARREST OF MAXIMAL-RATIO COMBINING FOR INVOLVED BRANCHES
SP119 REQUEST FOR RELEASE OF RADIO & WIRED BEARERS
SP120 ARREST OF RECEIPT THROUGH UPLINK RADIO CHANNEL
SP121 ARREST OF TRANSMISSION THROUGH DOWNLINK RADIO CHANNEL
SP122 RELEASE OF BS RESOURCES
SP123 RESPONSE TO REQUEST FOR RELEASE OF RADIO & WIRED BEARERS
SP124 DELETION OF DHT WIRED BRANCHES

FIG. 13

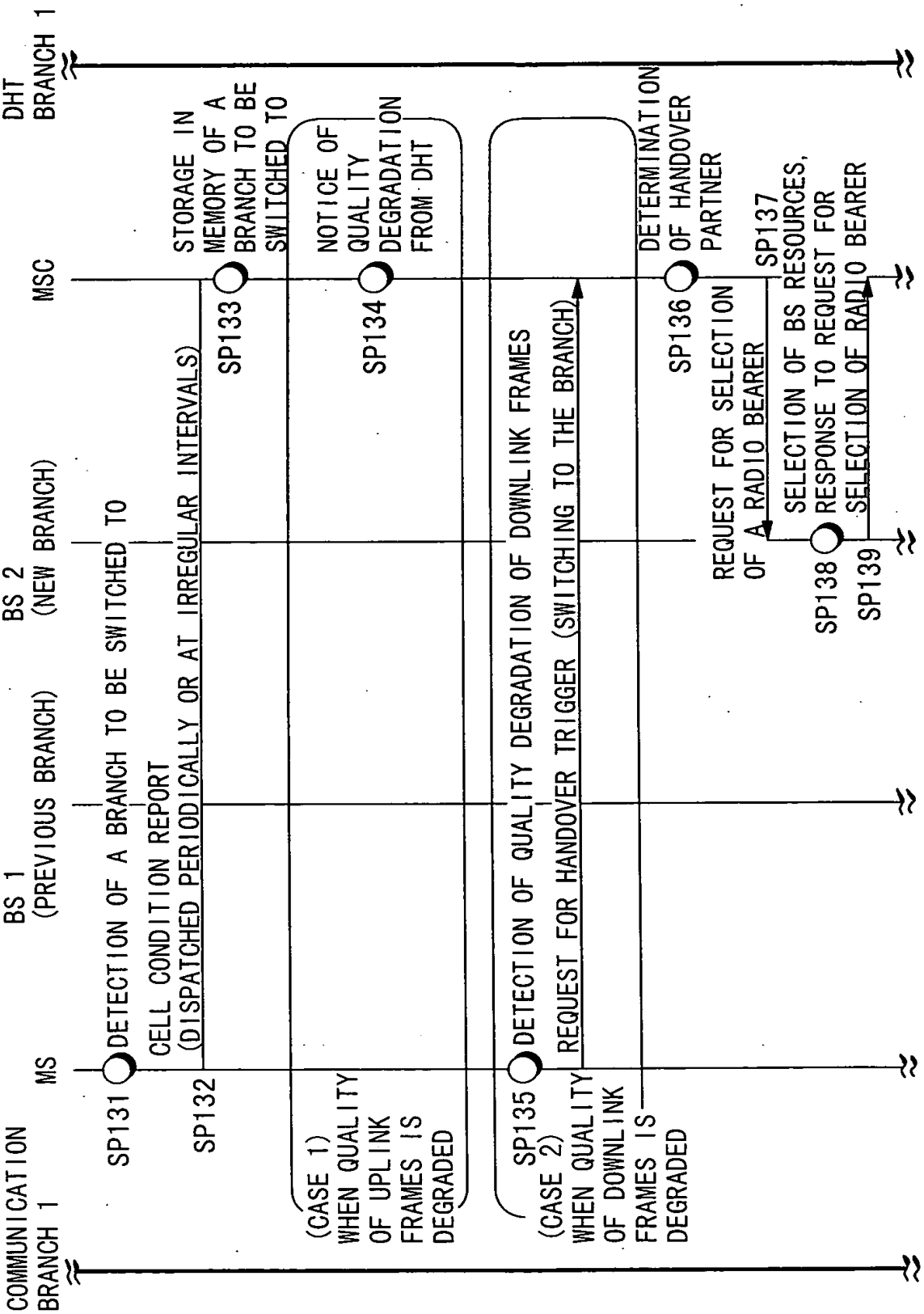

COMMUNICATION BRANCH 1
MS
BS 1 (PREVIOUS BRANCH)
BS 2 (NEW BRANCH)
MSC
DHT BRANCH 1
SP131
DETECTION OF A BRANCH TO BE SWITCHED TO
CELL CONDITION REPORT (DISPATCHED PERIODICALLY OR AT IRREGULAR INTERVALS)
SP132
SP133
STORAGE IN MEMORY OF A BRANCH TO BE SWITCHED TO
SP134
NOTICE OF QUALITY DEGRADATION FROM DHT
(CASE 1) WHEN QUALITY OF UPLINK FRAMES IS DEGRADED
SP135
DETECTION OF QUALITY DEGRADATION OF DOWNLINK FRAMES
REQUEST FOR HANDOVER TRIGGER (SWITCHING TO THE BRANCH)
(CASE 2) WHEN QUALITY OF DOWNLINK FRAMES IS DEGRADED
SP136
DETERMINATION OF HANDOVER PARTNER
REQUEST FOR SELECTION OF A RADIO BEARER
SP137
SELECTION OF BS RESOURCES, RESPONSE TO REQUEST FOR SELECTION OF RADIO BEARER
SP138
SP139

FIG. 14

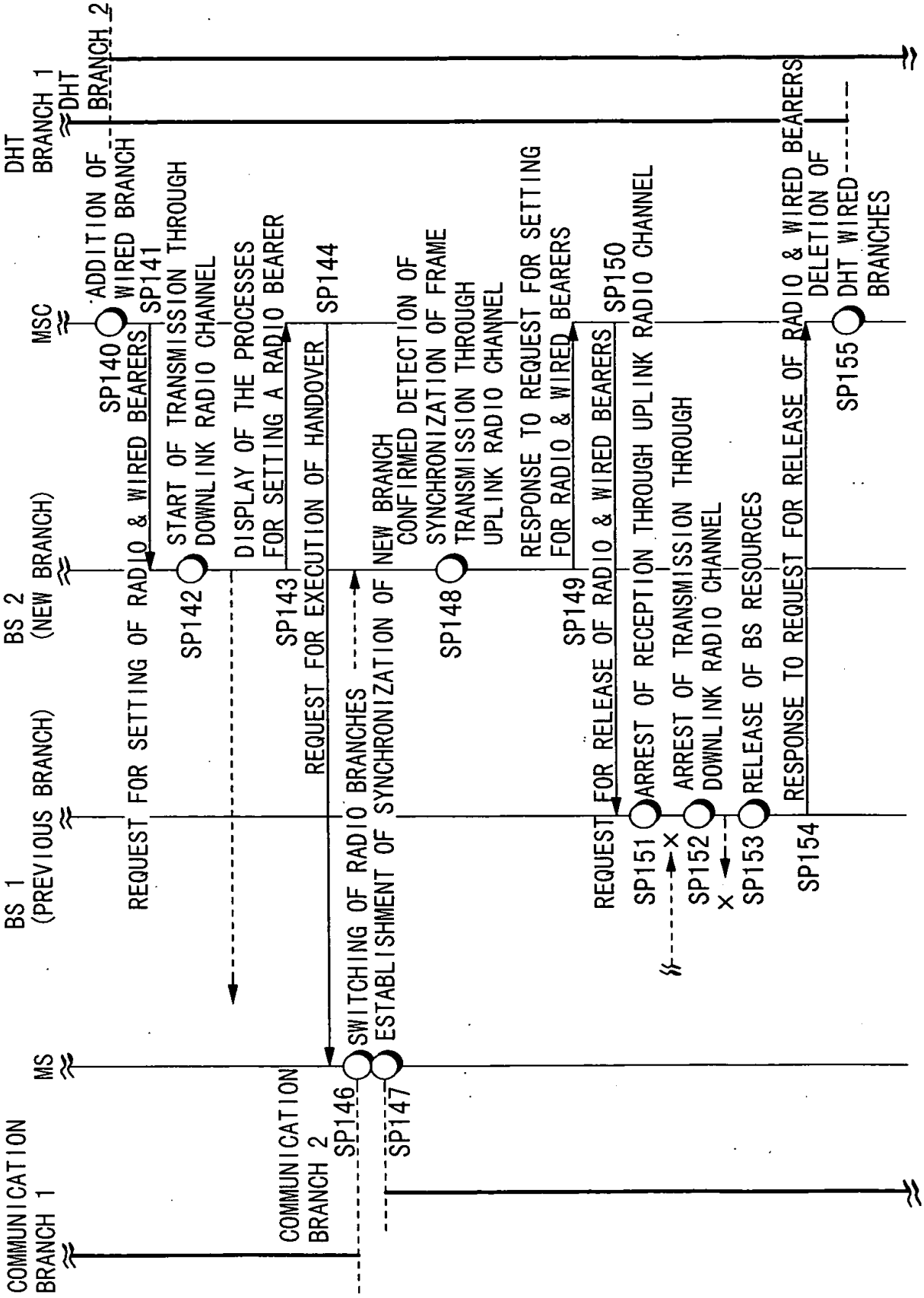

COMMUNICATION BRANCH 1
MS
BS 1 (PREVIOUS BRANCH)
BS 2 (NEW BRANCH)
MSC
DHT BRANCH 1
DHT BRANCH 2
COMMUNICATION BRANCH 2
SP140 ADDITION OF WIRED BRANCH
SP141 START OF TRANSMISSION THROUGH DOWNLINK RADIO CHANNEL
SP142 DISPLAY OF THE PROCESSES FOR SETTING A RADIO BEARER
SP143 REQUEST FOR EXECUTION OF HANDOVER
SP144 NEW BRANCH CONFIRMED DETECTION OF SYNCHRONIZATION OF FRAME TRANSMISSION THROUGH UPLINK RADIO CHANNEL
SP146 SWITCHING OF RADIO BRANCHES
SP147 ESTABLISHMENT OF SYNCHRONIZATION OF
SP148 RESPONSE TO REQUEST FOR SETTING FOR RADIO & WIRED BEARERS
SP149 REQUEST FOR RELEASE OF RADIO & WIRED BEARERS
SP150 ARREST OF RECEPTION THROUGH UPLINK RADIO CHANNEL
SP151
SP152 ARREST OF TRANSMISSION THROUGH DOWNLINK RADIO CHANNEL
SP153 RELEASE OF BS RESOURCES
SP154 RESPONSE TO REQUEST FOR RELEASE OF RADIO & WIRED BEARERS
SP155 DELETION OF DHT WIRED BRANCHES
REQUEST FOR SETTING OF RADIO & WIRED BEARERS

FIG. 15

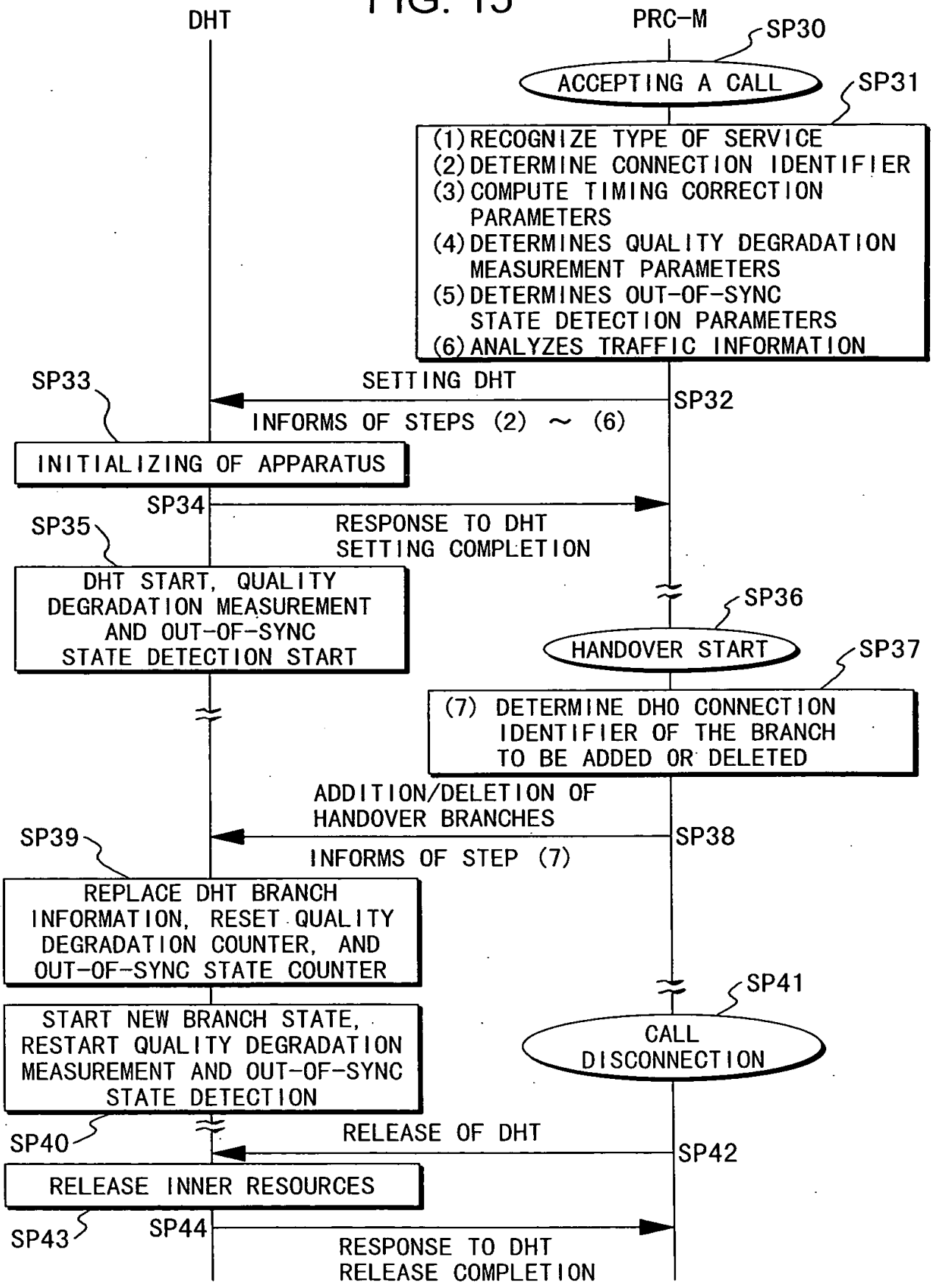

DHT
PRC-M
SP30
ACCEPTING A CALL
SP31
(1) RECOGNIZE TYPE OF SERVICE
(2) DETERMINE CONNECTION IDENTIFIER
(3) COMPUTE TIMING CORRECTION PARAMETERS
(4) DETERMINES QUALITY DEGRADATION MEASUREMENT PARAMETERS
(5) DETERMINES OUT-OF-SYNC STATE DETECTION PARAMETERS
(6) ANALYZES TRAFFIC INFORMATION
SP33
SETTING DHT
SP32
INFORMS OF STEPS (2) ~ (6)
INITIALIZING OF APPARATUS
SP34
SP35
RESPONSE TO DHT SETTING COMPLETION
DHT START, QUALITY DEGRADATION MEASUREMENT AND OUT-OF-SYNC STATE DETECTION START
SP36
HANDOVER START
SP37
(7) DETERMINE DHO CONNECTION IDENTIFIER OF THE BRANCH TO BE ADDED OR DELETED
ADDITION/DELETION OF HANDOVER BRANCHES
SP39
SP38
INFORMS OF STEP (7)
REPLACE DHT BRANCH INFORMATION, RESET QUALITY DEGRADATION COUNTER, AND OUT-OF-SYNC STATE COUNTER
SP41
START NEW BRANCH STATE, RESTART QUALITY DEGRADATION MEASUREMENT AND OUT-OF-SYNC STATE DETECTION
CALL DISCONNECTION
SP40
RELEASE OF DHT
SP42
RELEASE INNER RESOURCES
SP43
SP44
RESPONSE TO DHT RELEASE COMPLETION

FIG. 16

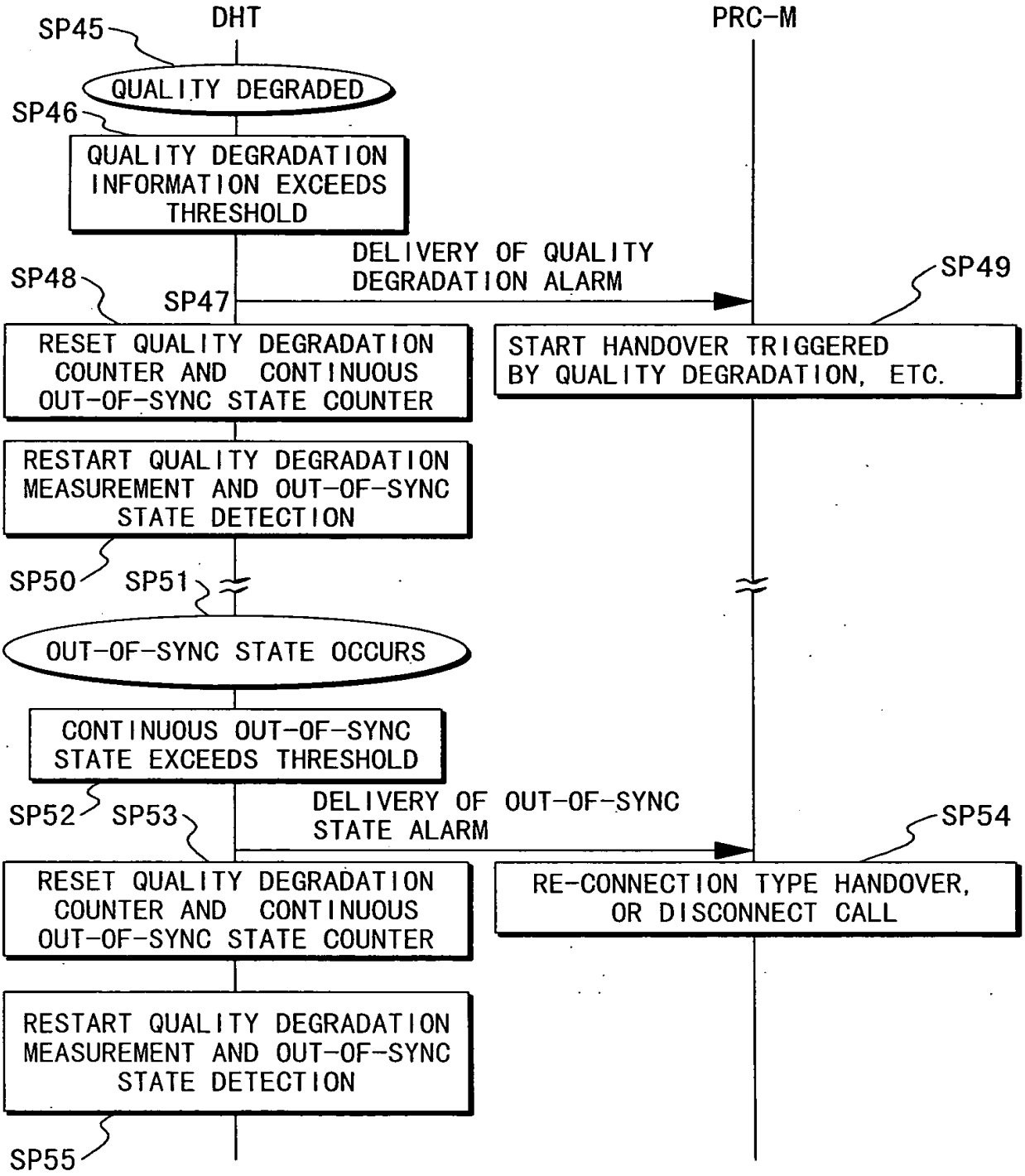

DHT
PRC-M
SP45
QUALITY DEGRADED
SP46
QUALITY DEGRADATION INFORMATION EXCEEDS THRESHOLD
DELIVERY OF QUALITY DEGRADATION ALARM
SP48
SP47
SP49
RESET QUALITY DEGRADATION COUNTER AND CONTINUOUS OUT-OF-SYNC STATE COUNTER
START HANDOVER TRIGGERED BY QUALITY DEGRADATION, ETC.
RESTART QUALITY DEGRADATION MEASUREMENT AND OUT-OF-SYNC STATE DETECTION
SP50
SP51
OUT-OF-SYNC STATE OCCURS
CONTINUOUS OUT-OF-SYNC STATE EXCEEDS THRESHOLD
SP52
SP53
DELIVERY OF OUT-OF-SYNC STATE ALARM
SP54
RESET QUALITY DEGRADATION COUNTER AND CONTINUOUS OUT-OF-SYNC STATE COUNTER
RE-CONNECTION TYPE HANDOVER, OR DISCONNECT CALL
RESTART QUALITY DEGRADATION MEASUREMENT AND OUT-OF-SYNC STATE DETECTION
SP55

FIG. 17

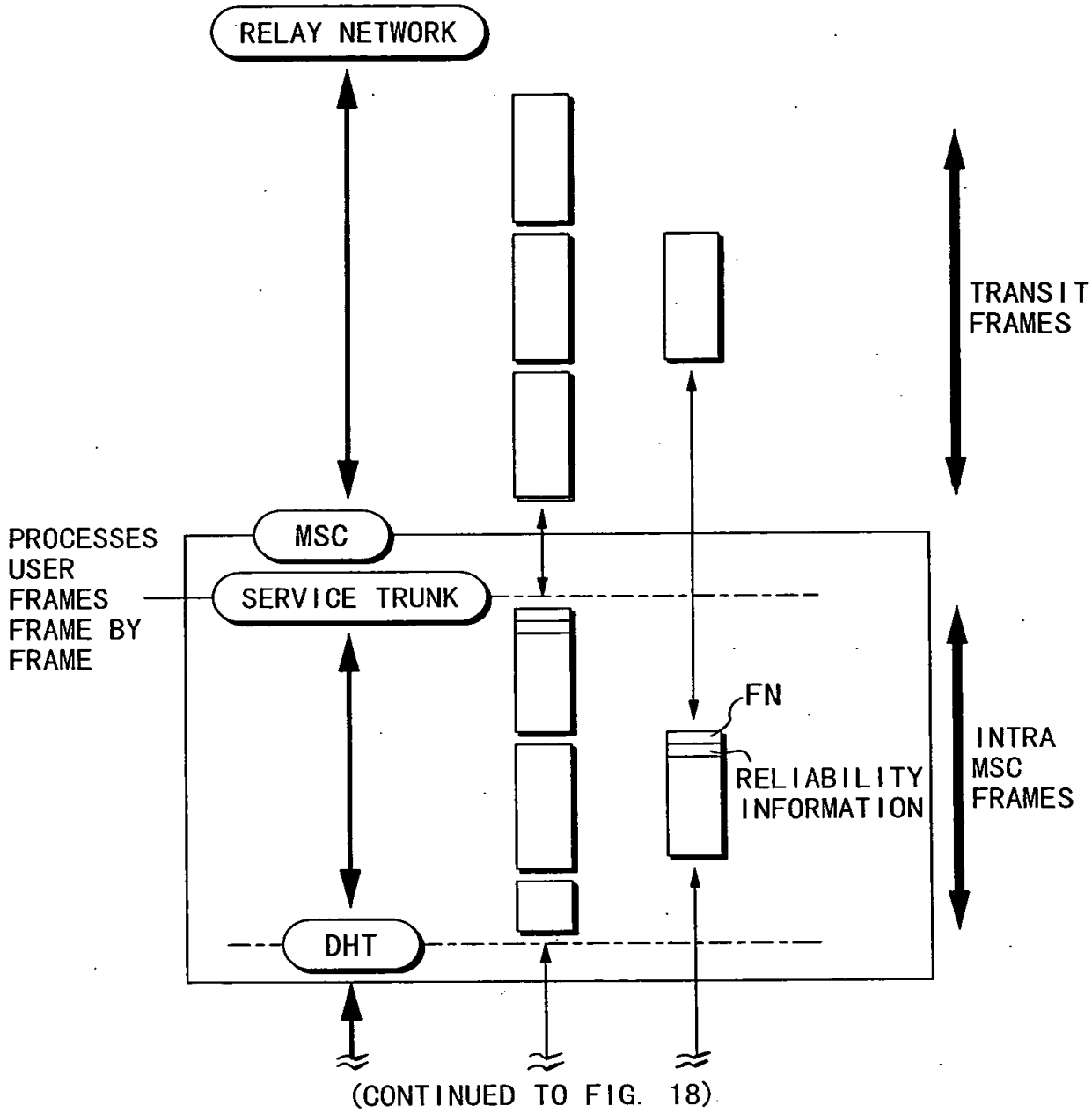


FIG. 18

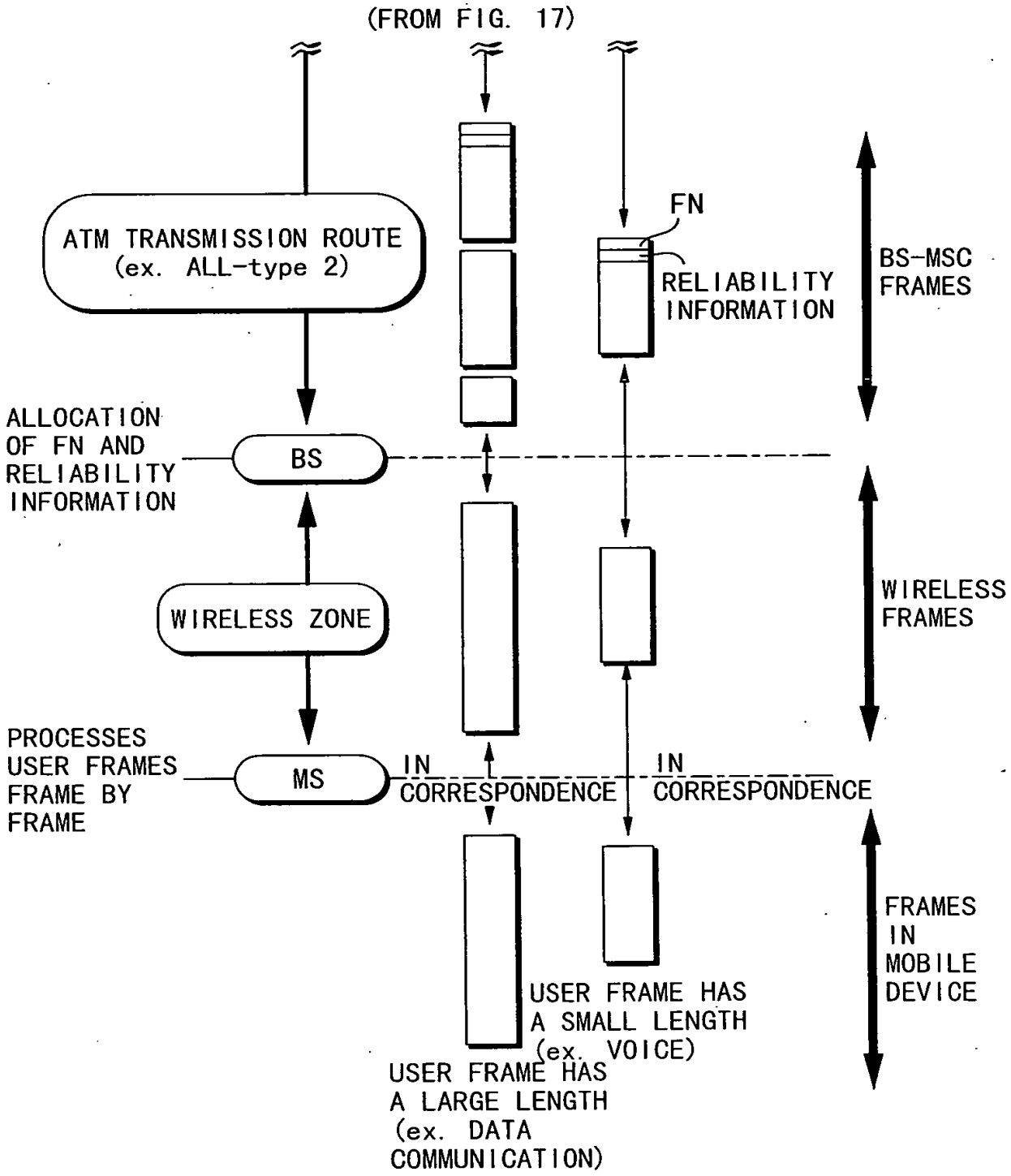
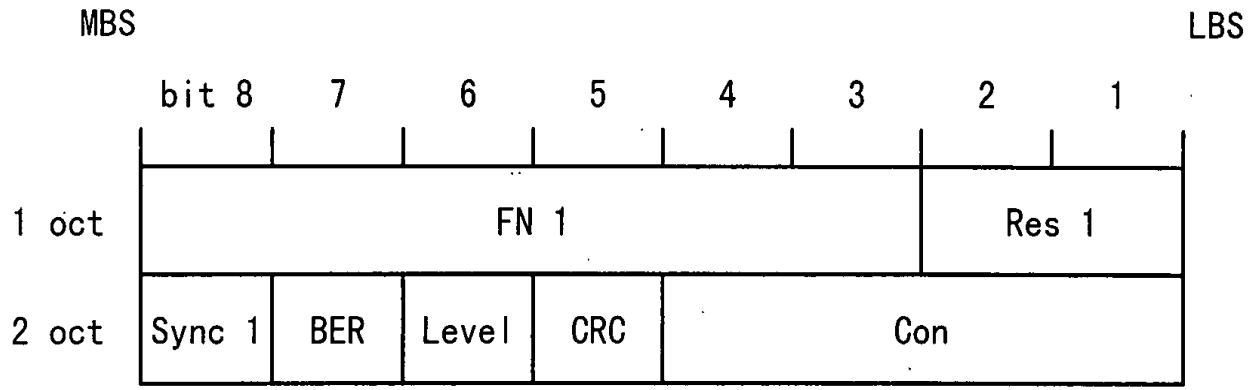

(FROM FIG. 17)
ATM TRANSMISSION ROUTE
(ex. ALL-type 2)
FN
RELIABILITY INFORMATION
BS-MSC FRAMES
ALLOCATION OF FN AND RELIABILITY INFORMATION
BS
WIRELESS ZONE
WIRELESS FRAMES
PROCESSES USER FRAMES FRAME BY FRAME
MS
IN CORRESPONDENCE
IN CORRESPONDENCE
FRAMES IN MOBILE DEVICE
USER FRAME HAS A SMALL LENGTH (ex. VOICE)
USER FRAME HAS A LARGE LENGTH (ex. DATA COMMUNICATION)

FIG. 19



FN	: WIRELESS FRAME NUMBER	0～63
Sync	: OUT-OF-SYNC STATE OF RADIO FRAMES EVALUATION BIT	1 = OUT-OF-SYNC, 0 = SYNC MAINTAINED
BER	: BER INFERIORITY DECISION BIT	1 = DEGRADATION DETECTED, 0 = NORMAL
Level	: LEVEL DEGRADATION EVALUATION BIT	1 = DEGRADATION DETECTED, 0 = NORMAL
CRC	: CRC DECISION BIT	1 = NG, 0 = OK
Con	: RECEIVED SIR VALUE	0～F(H) (16 STEPS) A LARGER NUMBER INDICATES A LARGER RECEIVED SIR.
Res	: RESERVE BIT	

FIG. 20

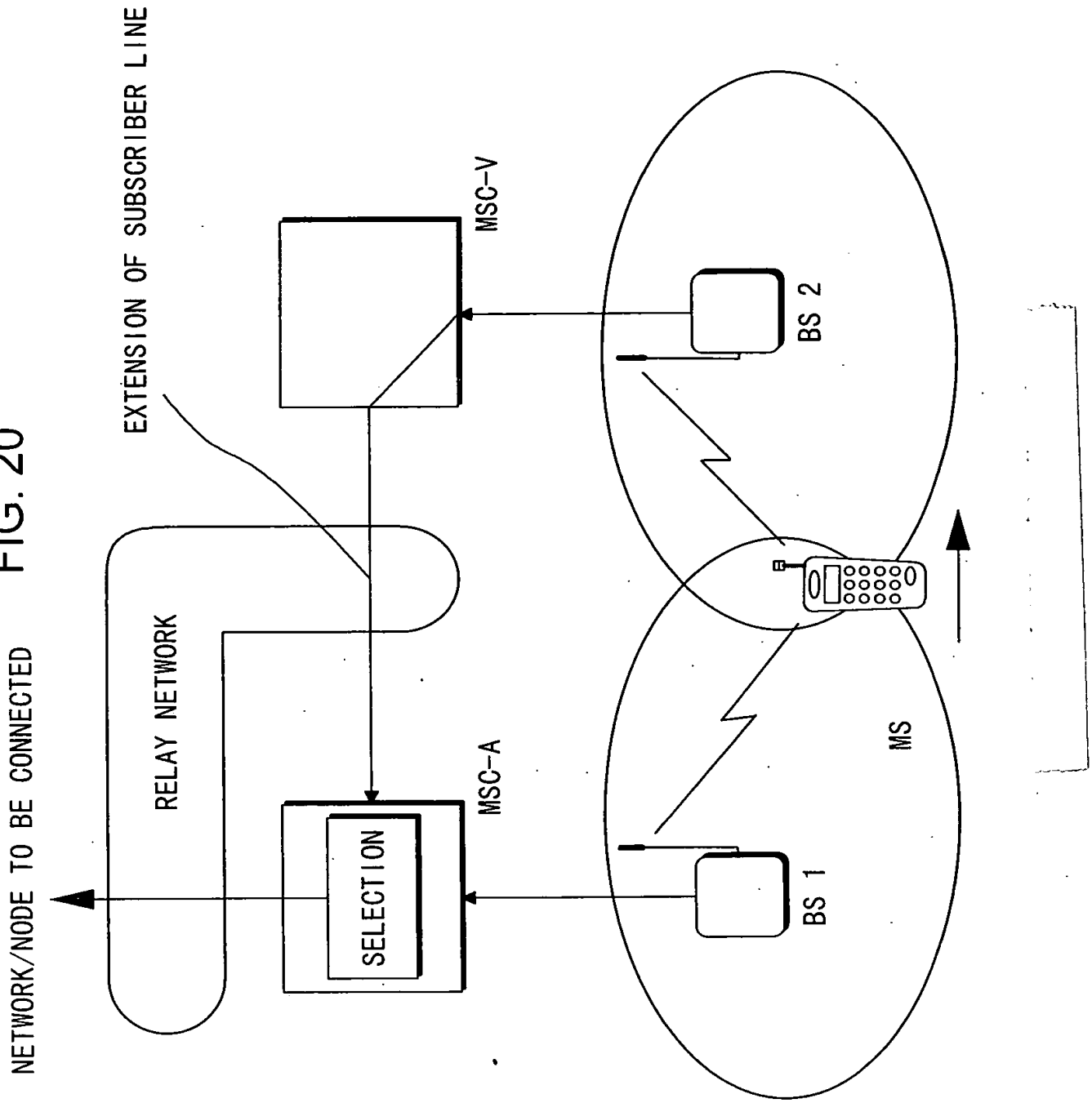


FIG. 21

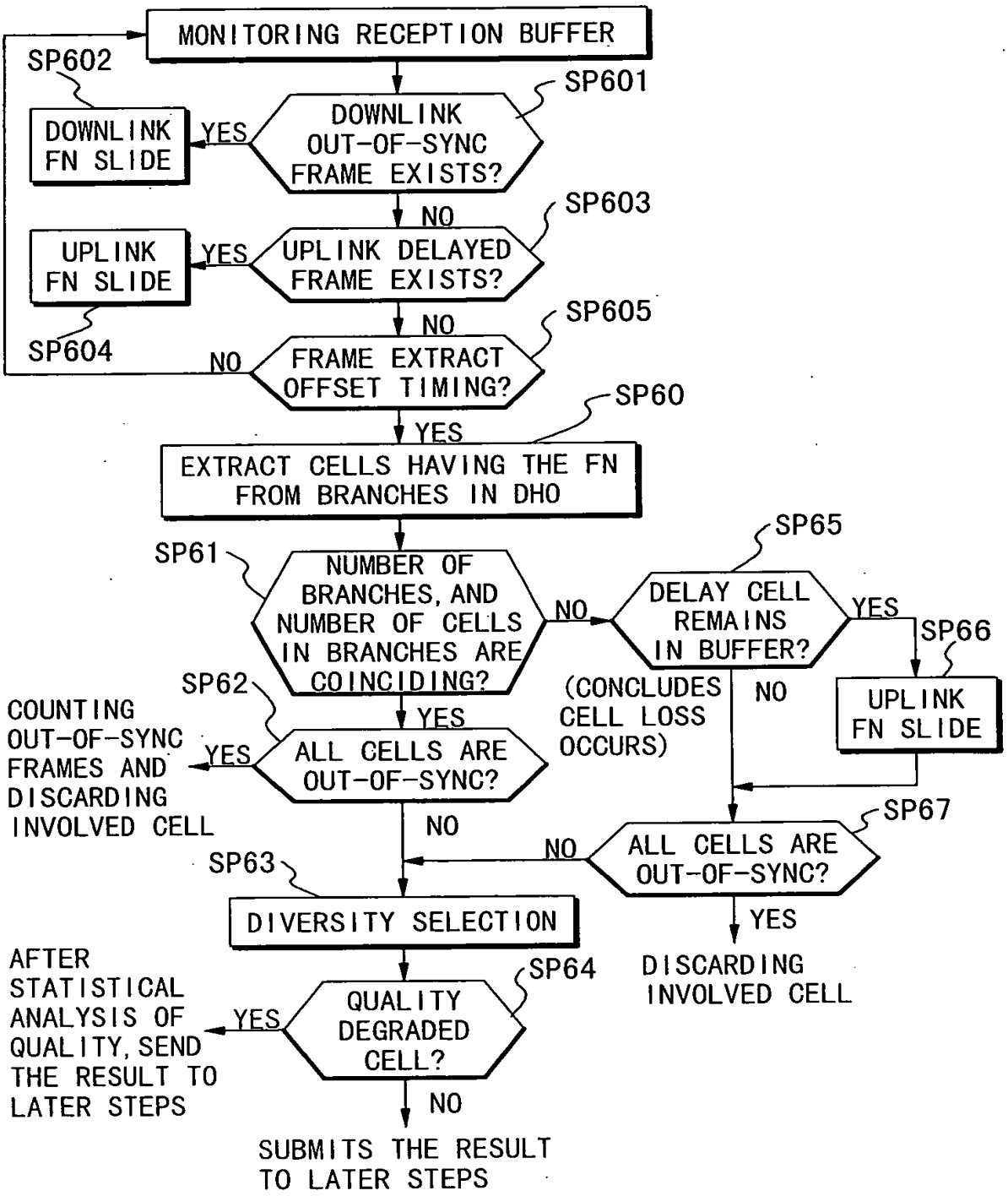

MONITORING RECEPTION BUFFER
SP602
SP601
DOWNLINK FN SLIDE
YES
DOWNLINK OUT-OF-SYNC FRAME EXISTS?
NO
SP603
UPLINK FN SLIDE
YES
UPLINK DELAYED FRAME EXISTS?
NO
SP605
SP604
NO
FRAME EXTRACT OFFSET TIMING?
SP60
YES
EXTRACT CELLS HAVING THE FN FROM BRANCHES IN DHO
SP65
SP61
NUMBER OF BRANCHES, AND NUMBER OF CELLS IN BRANCHES ARE COINCIDING?
NO
DELAY CELL REMAINS IN BUFFER?
YES
SP66
UPLINK FN SLIDE
(CONCLUDES CELL LOSS OCCURS)
NO
SP62
YES
COUNTING OUT-OF-SYNC FRAMES AND DISCARDING INVOLVED CELL
YES
ALL CELLS ARE OUT-OF-SYNC?
NO
SP67
NO
ALL CELLS ARE OUT-OF-SYNC?
SP63
DIVERSITY SELECTION
YES
DISCARDING INVOLVED CELL
SP64
AFTER STATISTICAL ANALYSIS OF QUALITY, SEND THE RESULT TO LATER STEPS
YES
QUALITY DEGRADED CELL?
NO
SUBMITS THE RESULT TO LATER STEPS

FIG. 22

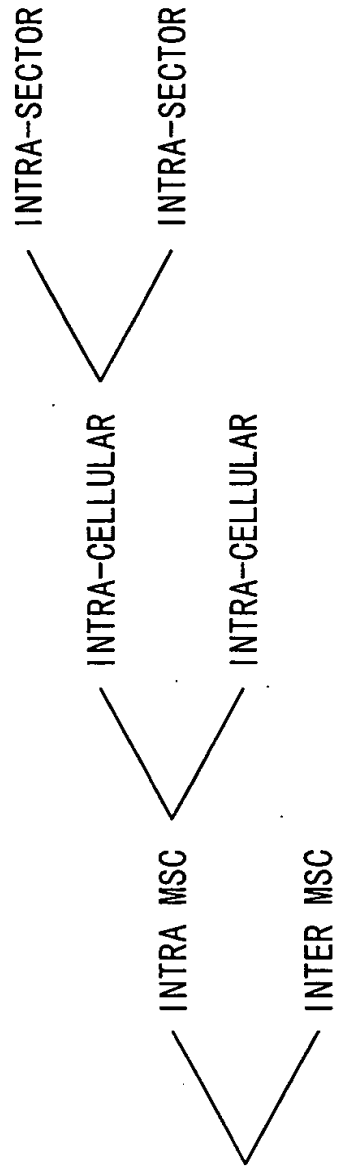

INTRA-SECTOR
INTRA-SECTOR
INTRA-CELLULAR
INTRA-CELLULAR
INTRA MSC
INTER MSC

FIG. 23

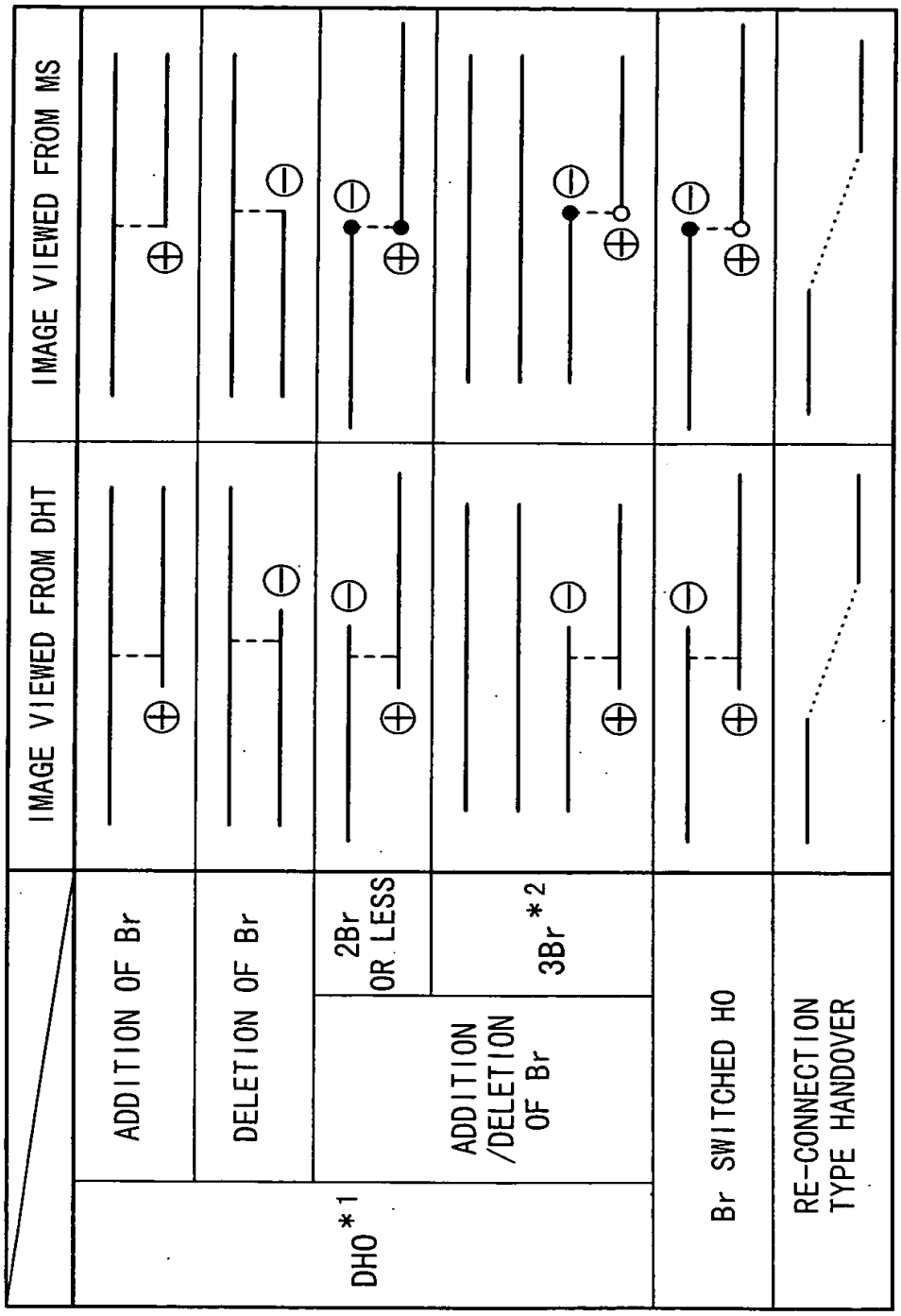
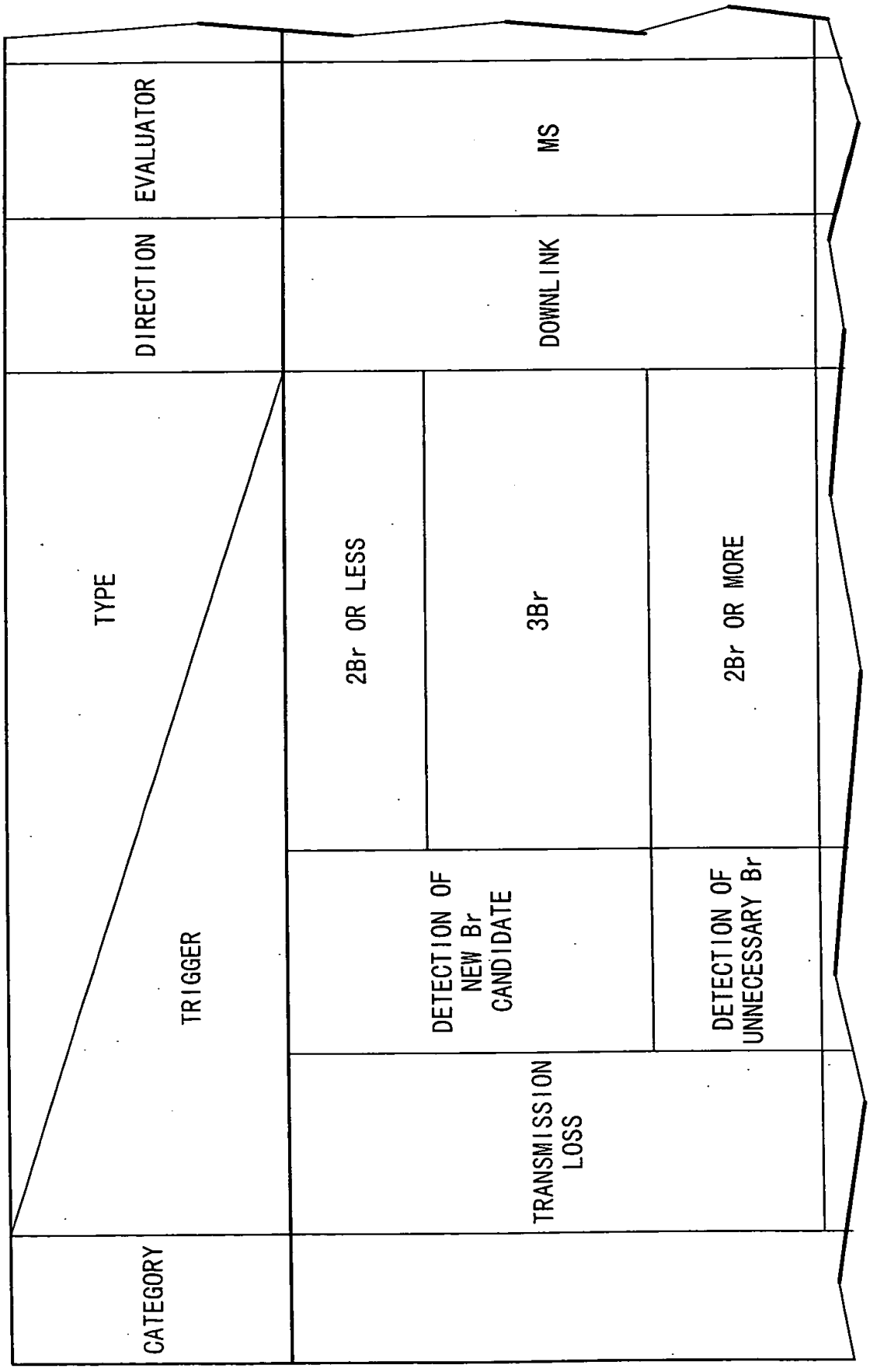
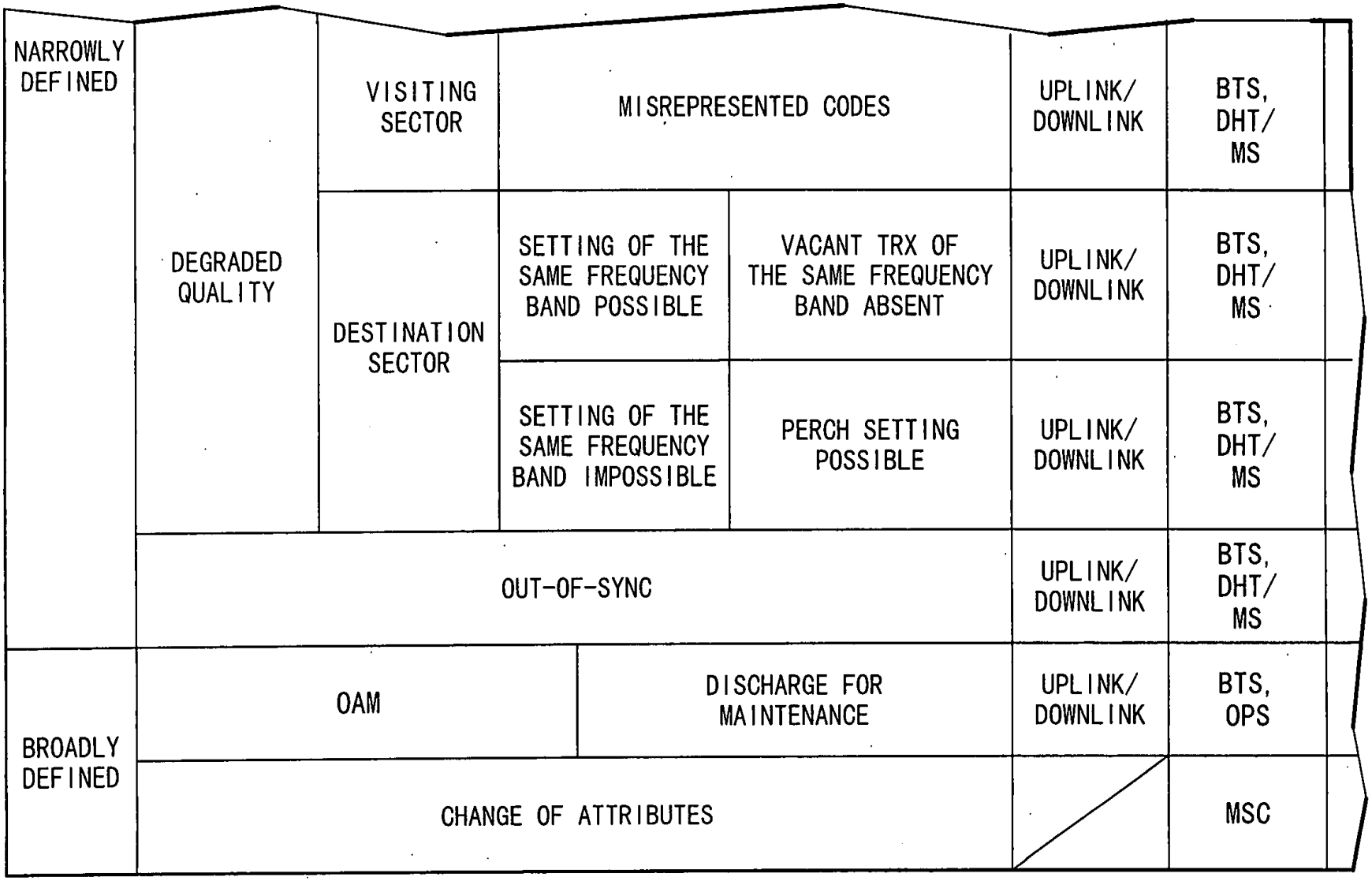


IMAGE VIEWED FROM DHT
IMAGE VIEWED FROM MS
DHO*1
ADDITION OF Br
DELETION OF Br
ADDITION /DELETION OF Br
2Br OR LESS
3Br*2
Br SWITCHED HO
RE-CONNECTION TYPE HANDOVER

FIG. 24


CATEGORY
TRIGGER
TYPE
DIRECTION
EVALUATOR
TRANSMISSION LOSS
DETECTION OF NEW Br CANDIDATE
DETECTION OF UNNECESSARY Br
2Br OR LESS
3Br
2Br OR MORE
DOWNLINK
MS

CONTINUED FROM FIG. 24



CONTINUED FROM FIG. 24

CRITERIA FOR EVALUATION	DHT FIXED					
	DHO					
	INTRA-CELLULAR, INTER-SECTOR			INTER-CELLULAR		
	ADDITION OF Br	DELETION OF Br	ADDITION /DELETION OF Br	ADDITION OF Br	DELETION OF Br	ADDITION /DELETION OF Br
$Lp_{NEW} < Lp_{OLD-MIN} + \Delta Lp_{INI}$ AND $SIR_{NEW} < SIR_{STD}$	○			○		
$Lp_{NEW} < Lp_{OLD-MIN} + \Delta Lp_{INI}$ AND $SIR_{NEW} < SIR_{STD}$ AND $Lp_{NEW} < Lp_{OLD-MIN} + \Delta Lp_{SWT}$			○			○
$Lp_{OLD-MAX} > Lp_{OLD-MIN} + \Delta Lp_{TER}$ OR $SIR_{MIN} < SIR_{STD}$		○			○	

CONTINUED FROM FIG. 24

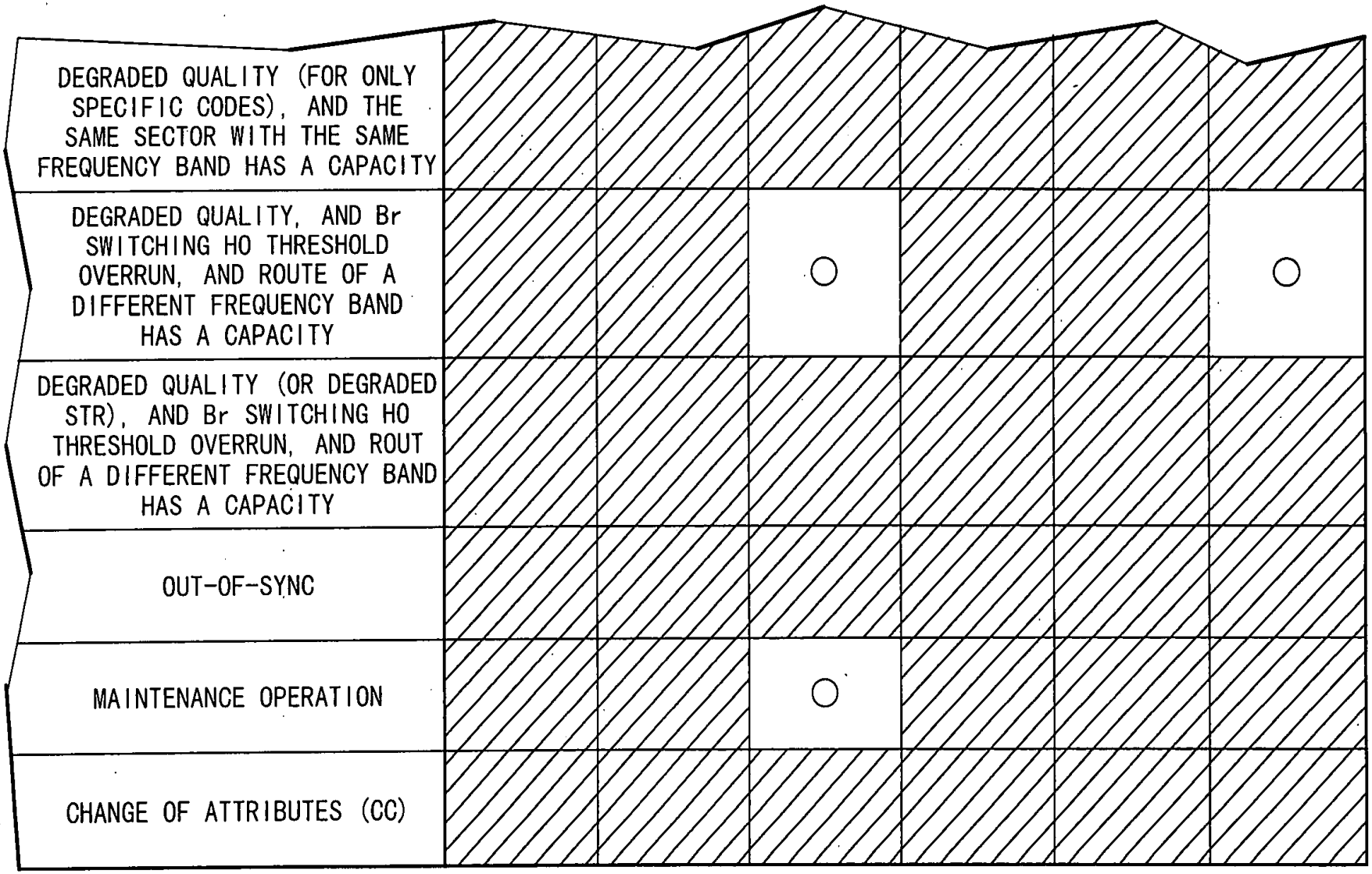
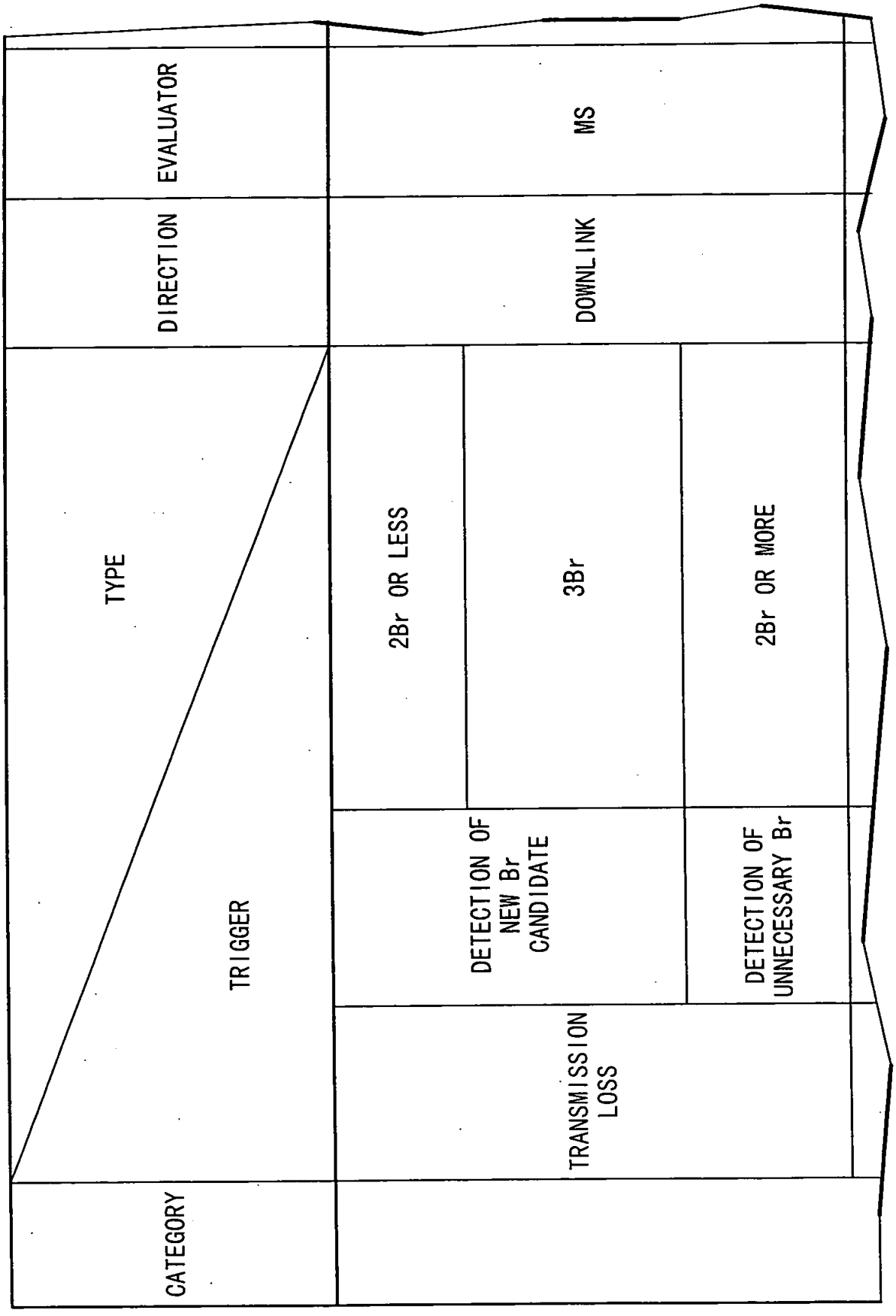


FIG. 25


EVALUATOR
DIRECTION
TYPE
TRIGGER
CATEGORY
MS
DOWNLINK
2Br OR LESS
3Br
2Br OR MORE
DETECTION OF NEW Br CANDIDATE
DETECTION OF UNNECESSARY Br
TRANSMISSION LOSS

CONTINUED FROM FIG. 25

NARROWLY DEFINED	DEGRADED QUALITY	VISITING SECTOR	MISREPRESENTED CODES		UPLINK/ DOWNLINK	BTS, DHT/ MS
		DESTINATION SECTOR	SETTING OF THE SAME FREQUENCY BAND POSSIBLE	VACANT TRX OF THE SAME FREQUENCY BAND ABSENT	UPLINK/ DOWNLINK	BTS, DHT/ MS
			SETTING OF THE SAME FREQUENCY BAND IMPOSSIBLE	PERCH SETTING POSSIBLE	UPLINK/ DOWNLINK	BTS, DHT/ MS
	OUT-OF-SYNC				UPLINK/ DOWNLINK	BTS, DHT/ MS
BROADLY DEFINED	OAM		DISCHARGE FOR MAINTENANCE		UPLINK/ DOWNLINK	BTS, OPS
	CHANGE OF ATTRIBUTES					MSC

CONTINUED FROM FIG. 25

CRITERIA FOR EVALUATION	DHT FIXED				DHT SWITCHING
	Br SWITCHING HO		RE-CONNECTION TYPE HO		Br SWITCHING HO
	INTRA-CELLULAR	INTER-SECTOR /INTRA-CELLULAR	INTRA-CELLULAR	INTER-SECTOR /INTRA -CELLULAR	INTRA-CELLULAR
	SAME FREQUENCY	DIFFERENT FREQUENCY	SAME/ DIFFERENT FREQUENCY	SAME/ DIFFERENT FREQUENCY	SAME/DIFFERENT FREQUENCY
$Lp_{NEW} < Lp_{OLD-MIN} + \Delta Lp_{INI}$ AND $SIR_{NEW} < SIR_{STD}$					
$Lp_{NEW} < Lp_{OLD-MIN} + \Delta Lp_{INI}$ AND $SIR_{NEW} < SIR_{STD}$ AND $Lp_{NEW} < Lp_{OLD-MIN} + \Delta Lp_{SWT}$					
$Lp_{OLD-MAX} > Lp_{OLD-MIN} + \Delta Lp_{TER}$ OR $SIR_{MIN} < SIR_{STD}$					

CONTINUED FROM FIG. 25

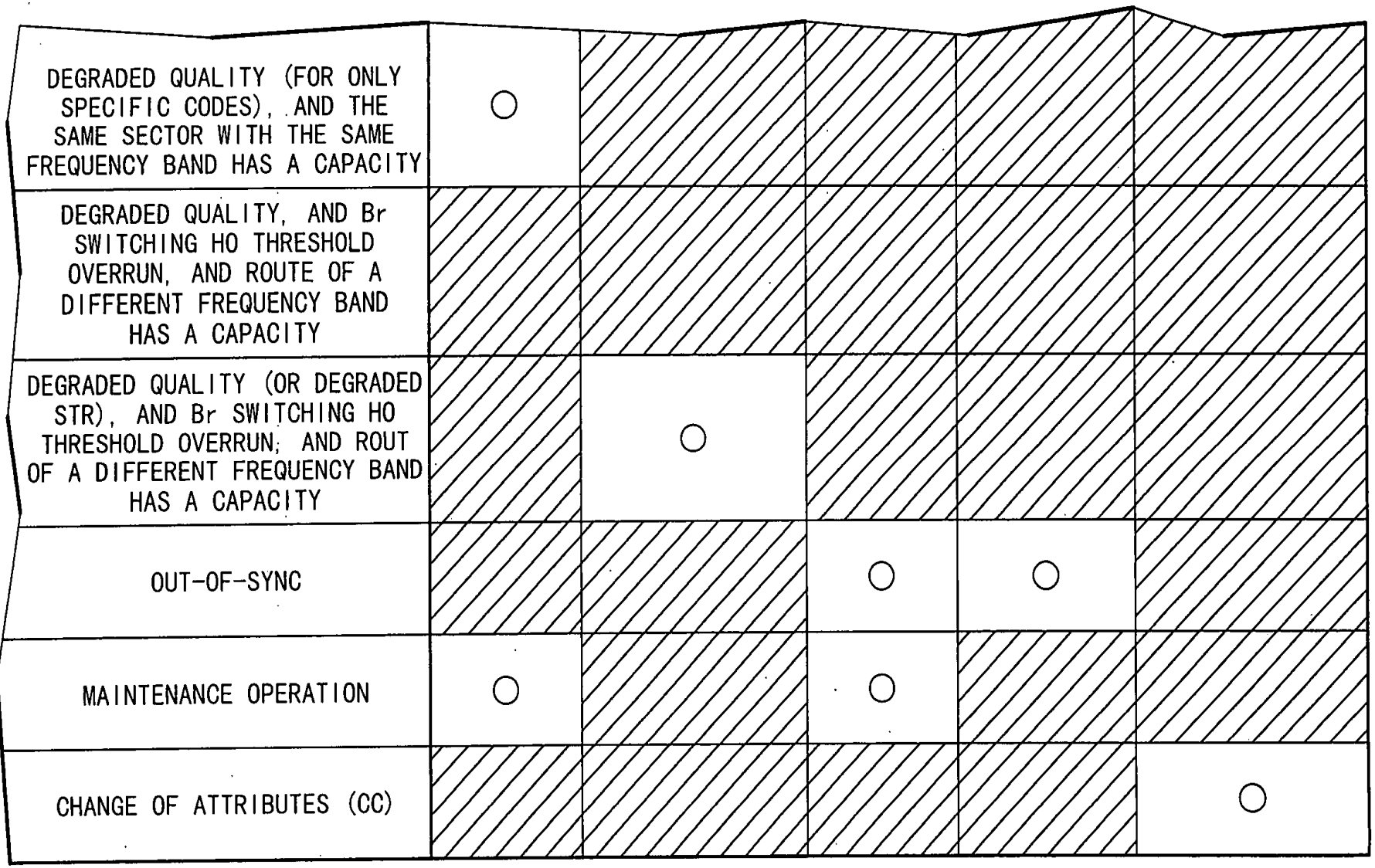


FIG. 26

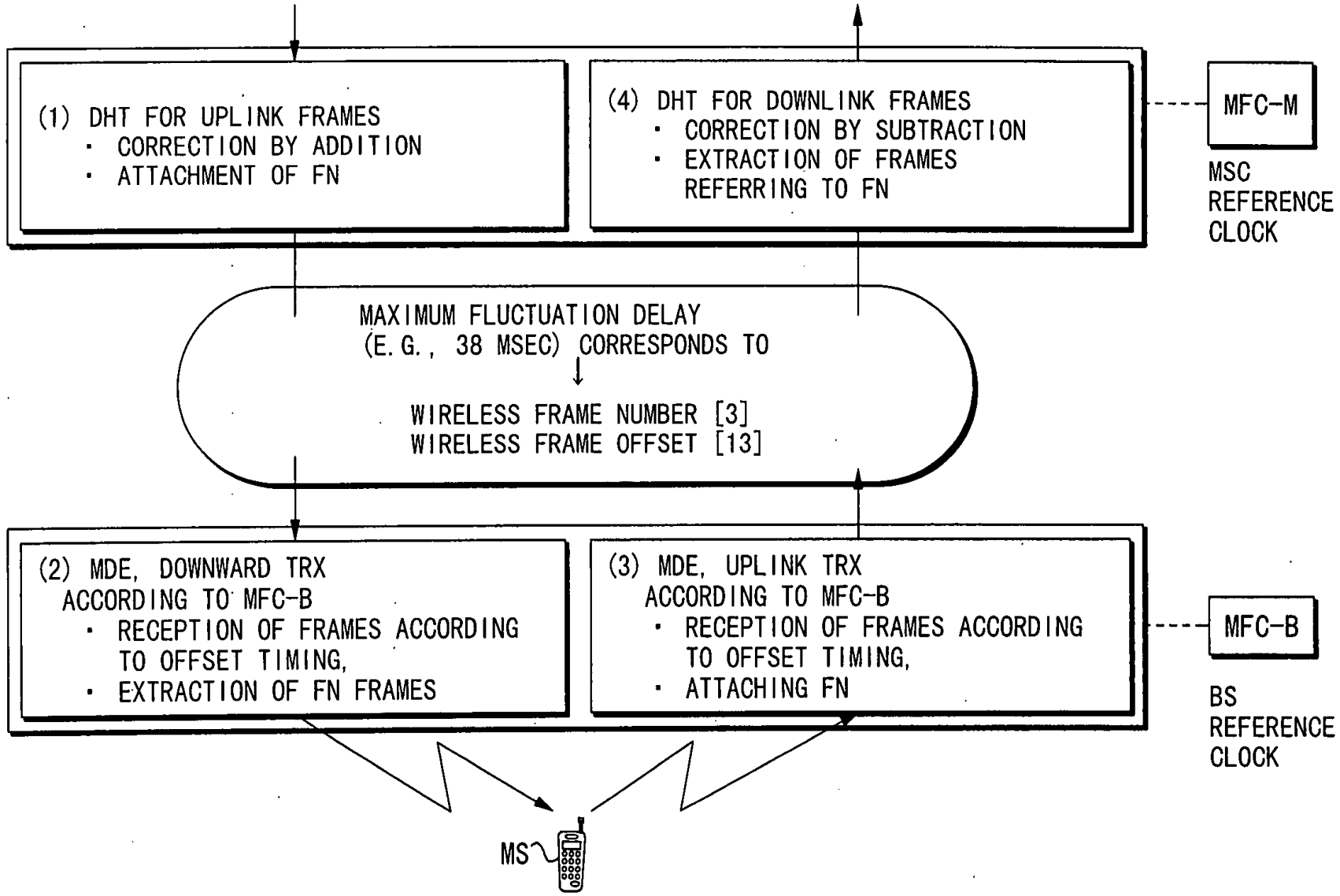


FIG. 27

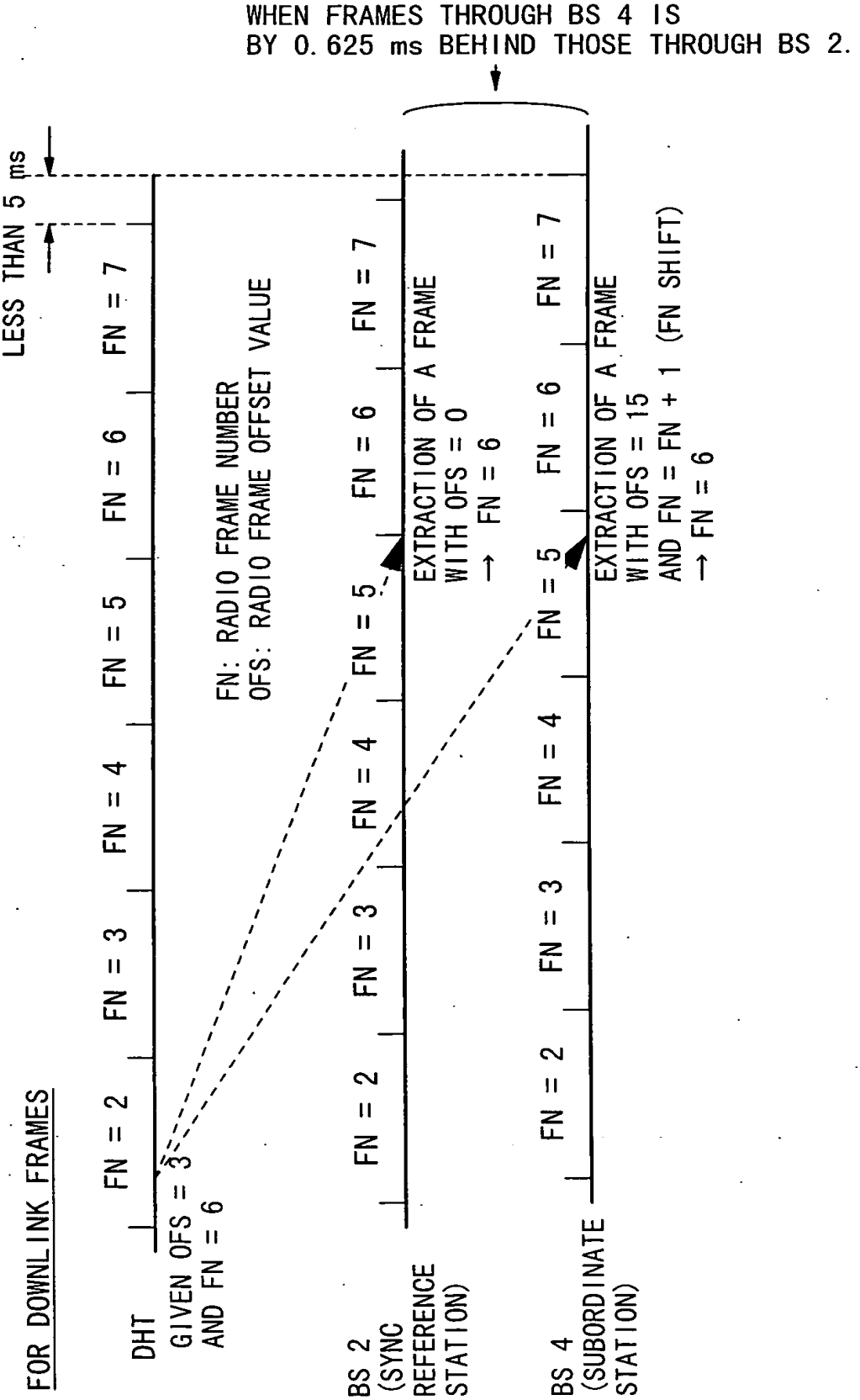

WHEN FRAMES THROUGH BS 4 IS
BY 0.625 ms BEHIND THOSE THROUGH BS 2.
SYNC PHASE DIFFERENCE,
LESS THAN 5 ms
FN: RADIO FRAME NUMBER
OFS: RADIO FRAME OFFSET VALUE
FOR DOWNLINK FRAMES
DHT
GIVEN OFS = 3
AND FN = 6
BS 2
(SYNC
REFERENCE
STATION)
BS 4
(SUBORDINATE
STATION)
EXTRACTION OF A FRAME
WITH OFS = 0
→ FN = 6
EXTRACTION OF A FRAME
WITH OFS = 15
AND FN = FN + 1 (FN SHIFT)
→ FN = 6
FN = 2
FN = 3
FN = 4
FN = 5
FN = 6
FN = 7

FIG. 28

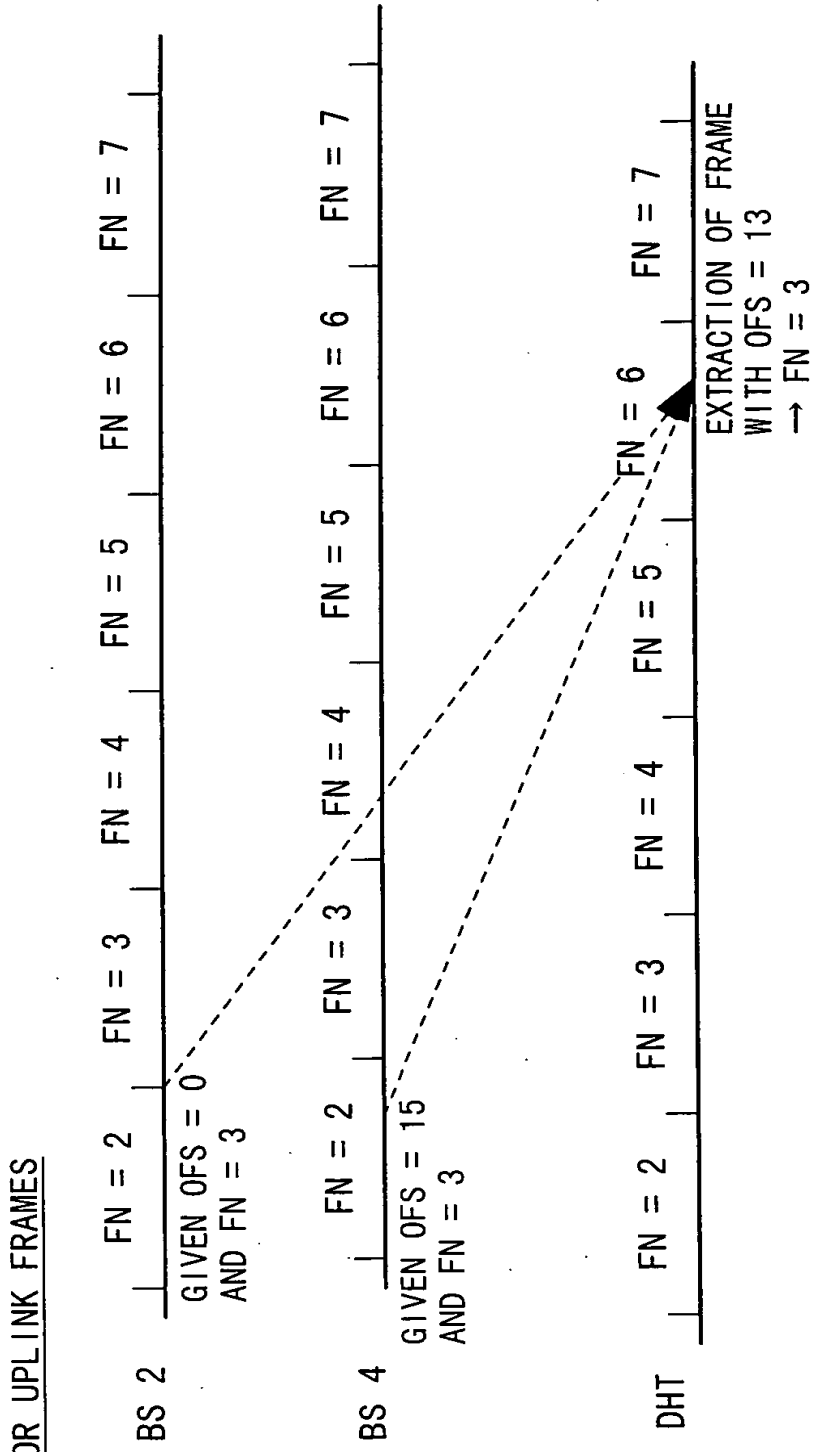

FOR UPLINK FRAMES
BS 2
FN = 2
FN = 3
FN = 4
FN = 5
FN = 6
FN = 7
GIVEN OFS = 0
AND FN = 3
BS 4
FN = 2
FN = 3
FN = 4
FN = 5
FN = 6
FN = 7
GIVEN OFS = 15
AND FN = 3
DHT
FN = 2
FN = 3
FN = 4
FN = 5
FN = 6
FN = 7
EXTRACTION OF FRAME
WITH OFS = 13
→ FN = 3

FIG. 29

			CALCULATION OF TIMING PARAMETERS
DOWNLINK FRAME	(1) DELIVERY TO DHT		DELIVERED AT THE TIMING OF OFS = [16] (FIXED) - [13] (CORRECTED) = [3]
			FN = [2] (REFERENTIAL CLK) + [3] (CORRECTED) + [1] (OFFSET ODD) = [6] GIVEN AT CLK = [2]
	(2) EXTRACTION AT BS	SYNC REFERENTIAL BS	EXTRACTION AT TIMING OF OFS = [0] (FIXED)
			EXTRACTION OF FRAME WITH FN = [6] (REFERENTIAL CLK) AT REFERENTIAL CLK = [6]
		SUBORDINATE BS	EXTRACTION AT TIMING OF OFS = [0] (FIXED) - [1] (SYNCHRONIZATION DIFFERENCE) = [-1] + [16](FN SHIFT) = [15]
			EXTRACTION OF FRAME WITH FN = [5] (REFERENTIAL CLK) + [1] (FN SHIFT) = [6] AT REFERENTIAL CLK = [5]

FIG. 30

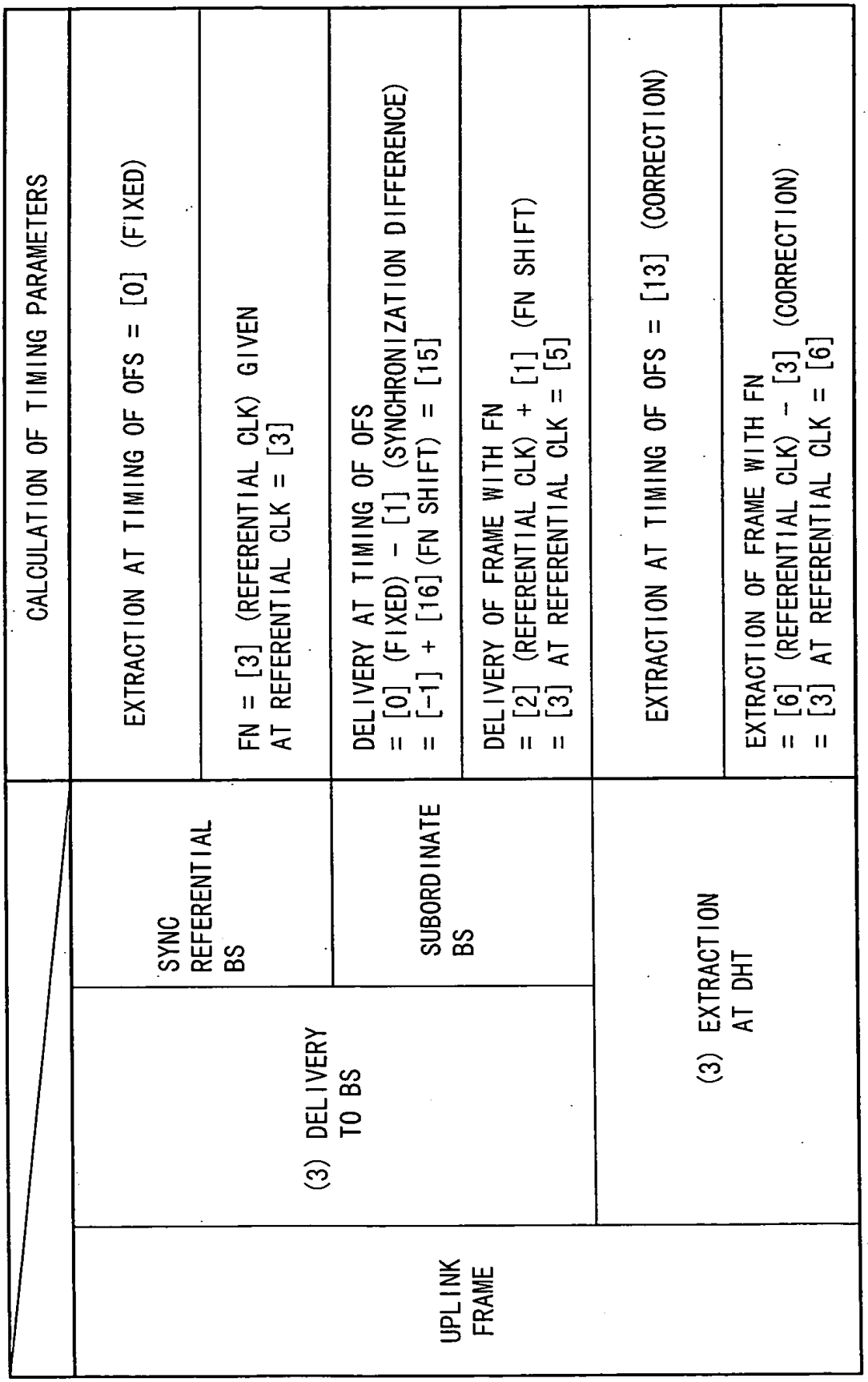

CALCULATION OF TIMING PARAMETERS
UPLINK FRAME
(3) DELIVERY TO BS
SYNC REFERENTIAL BS
SUBORDINATE BS
EXTRACTION AT TIMING OF OFS = [0] (FIXED)
FN = [3] (REFERENTIAL CLK) GIVEN AT REFERENTIAL CLK = [3]
DELIVERY AT TIMING OF OFS = [0] (FIXED) - [1] (SYNCHRONIZATION DIFFERENCE) = [-1] + [16] (FN SHIFT) = [15]
DELIVERY OF FRAME WITH FN = [2] (REFERENTIAL CLK) + [1] (FN SHIFT) = [3] AT REFERENTIAL CLK = [5]
(3) EXTRACTION AT DHT
EXTRACTION AT TIMING OF OFS = [13] (CORRECTION)
EXTRACTION OF FRAME WITH FN = [6] (REFERENTIAL CLK) - [3] (CORRECTION) = [3] AT REFERENTIAL CLK = [6]

FIG. 31

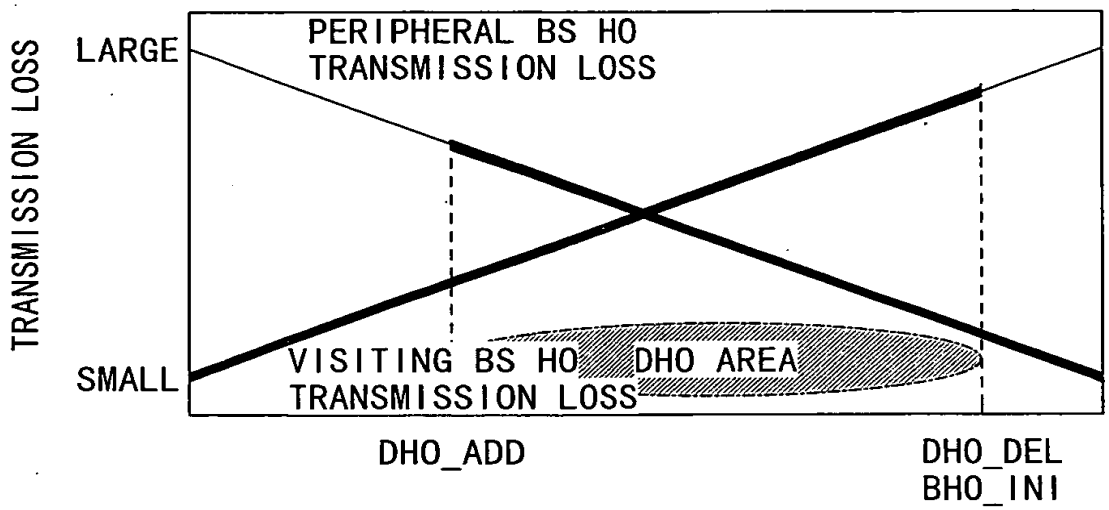

TRANSMISSION LOSS
LARGE
SMALL
PERIPHERAL BS HO
TRANSMISSION LOSS
VISITING BS HO
TRANSMISSION LOSS
DHO AREA
DHO_ADD
DHO_DEL
BHO_INI

FIG. 32

FN SLIDE PROCESSING PARAMETER MANAGEMENT TABLE

PARAMETER \ SERVICE TYPE		(a-1) MS～MSC LINK FOR AFFILIATED CONTROL SIGNALS	(a-2) VOICE	(a-3) DATA COMMUNICATION 1	...	(a-n) SERVICE n
FOR UPLINK FRAME	FN SLIDE UNIT	2	1	4		1
	FN SLIDE MAXIMAL WIDTH	10	5	16		3
FOR DOWNLINK FRAME	FN SLIDE UNIT	2	1	4		1
	FN SLIDE MAXIMAL WIDTH	10	5	16		3

FIG. 33

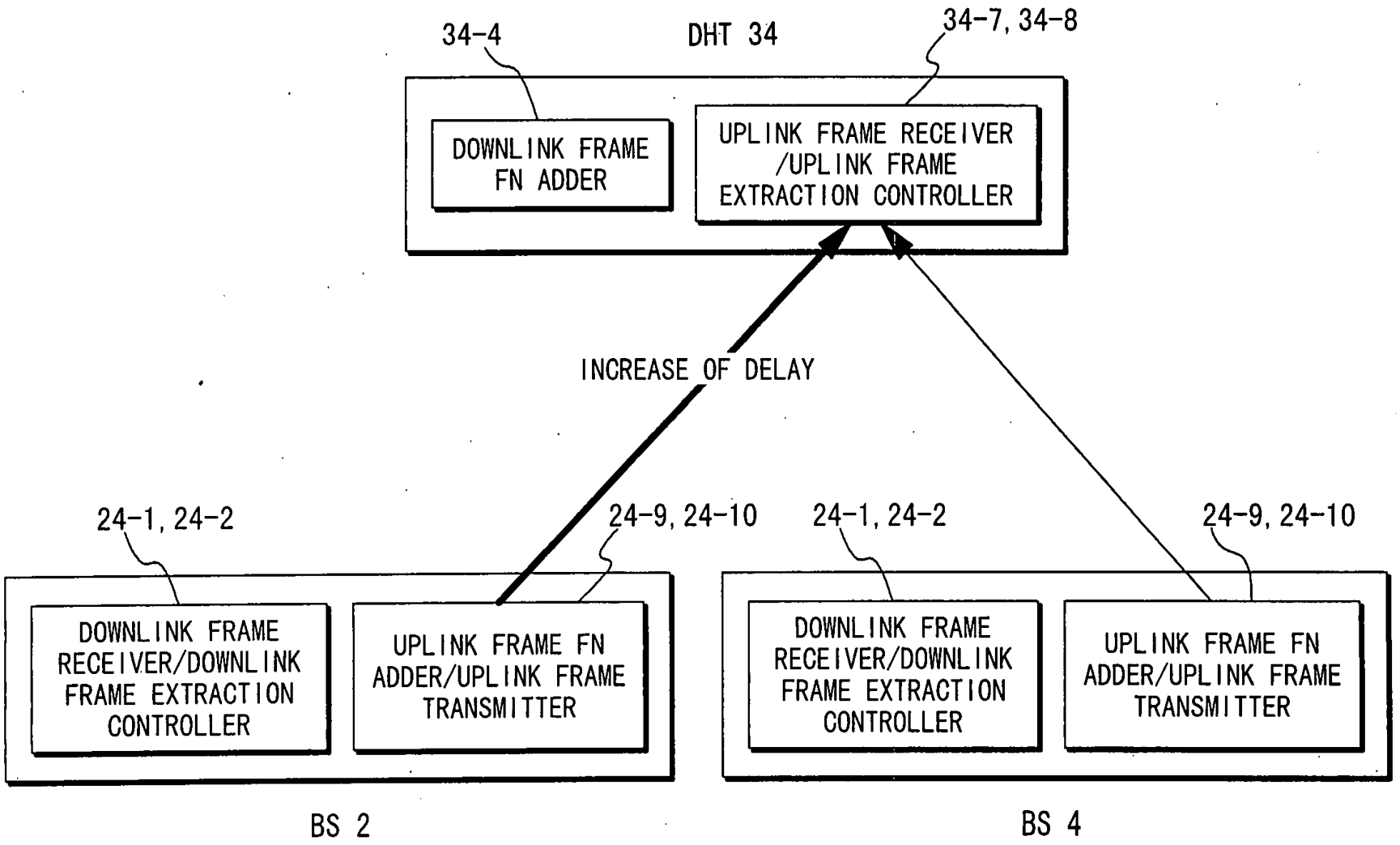


FIG. 34

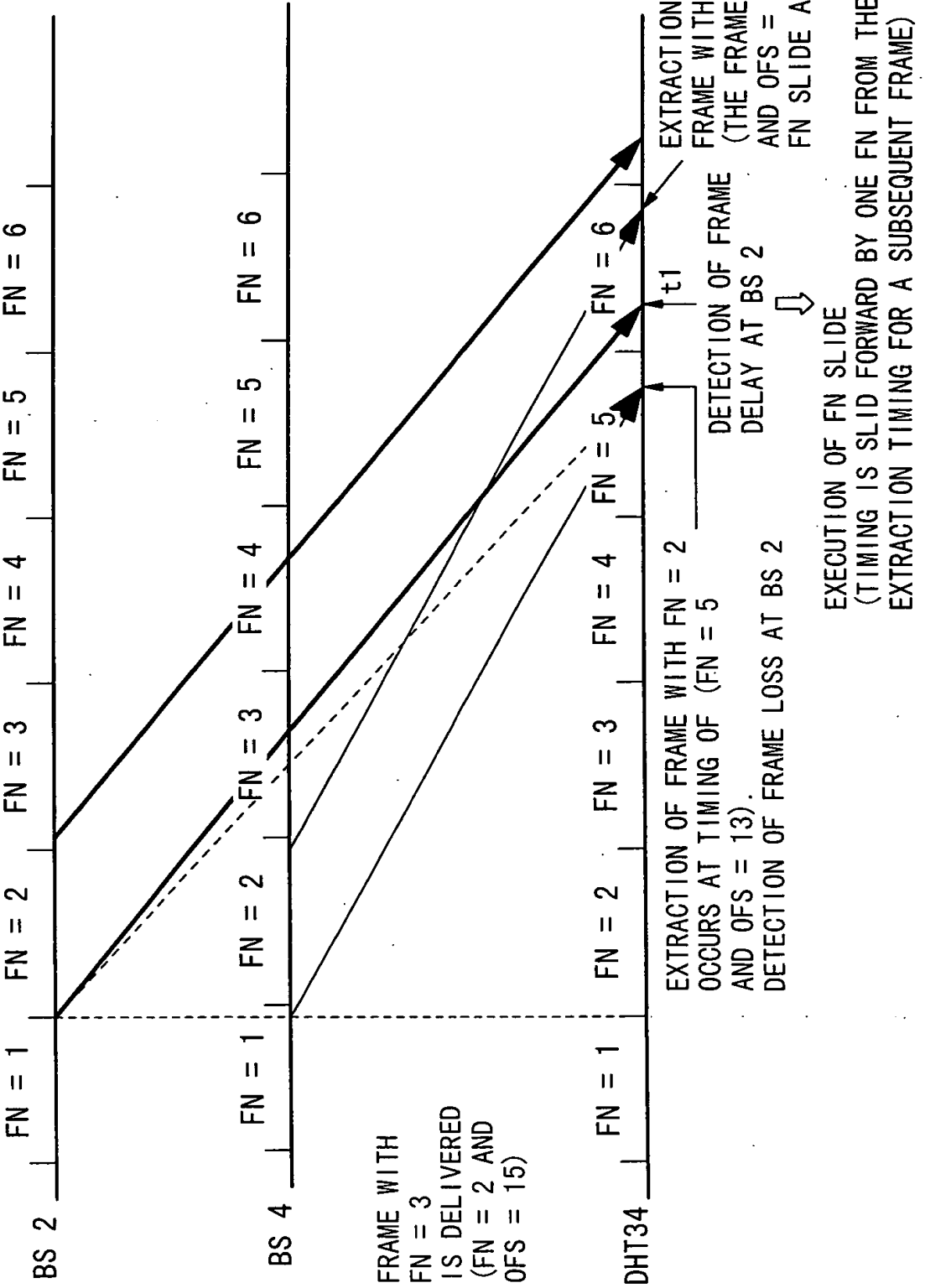

BS 2
BS 4
DHT34
FN = 1
FN = 2
FN = 3
FN = 4
FN = 5
FN = 6
FRAME WITH FN = 2
IS DELIVERED
(FN = 2 AND OFS = 0)
FRAME WITH
FN = 3
IS DELIVERED
(FN = 2 AND
OFS = 15)
EXTRACTION OF FRAME WITH FN = 2
OCCURS AT TIMING OF (FN = 5
AND OFS = 13).
DETECTION OF FRAME LOSS AT BS 2
DETECTION OF FRAME
DELAY AT BS 2
t1
EXTRACTION TIMING OF
FRAME WITH FN = 2
(THE FRAME HAS FN = 6
AND OFS = 13 AFTER
FN SLIDE ADJUSTMENT)
EXECUTION OF FN SLIDE
(TIMING IS SLID FORWARD BY ONE FN FROM THE
EXTRACTION TIMING FOR A SUBSEQUENT FRAME)

FIG. 35

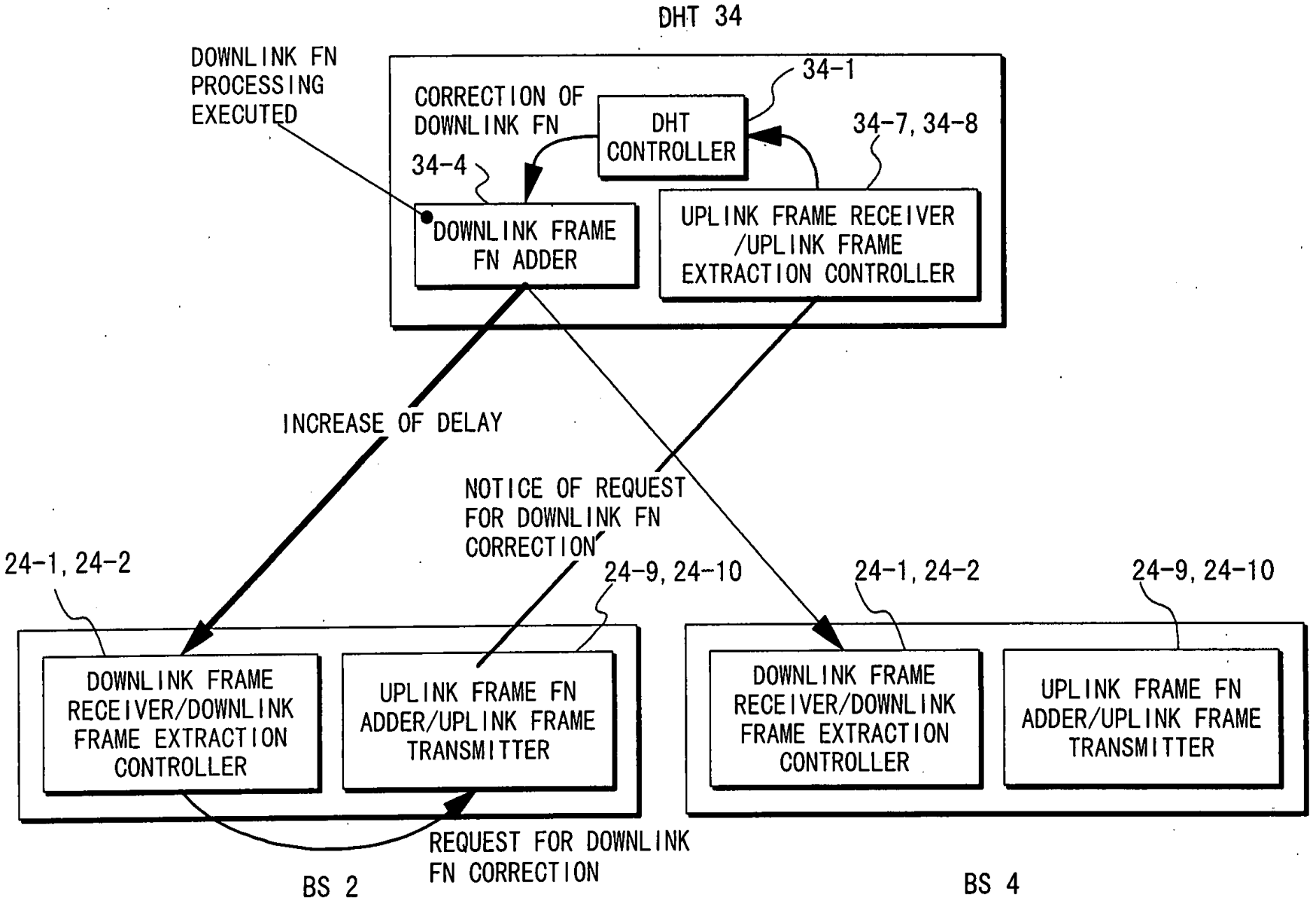


FIG. 36

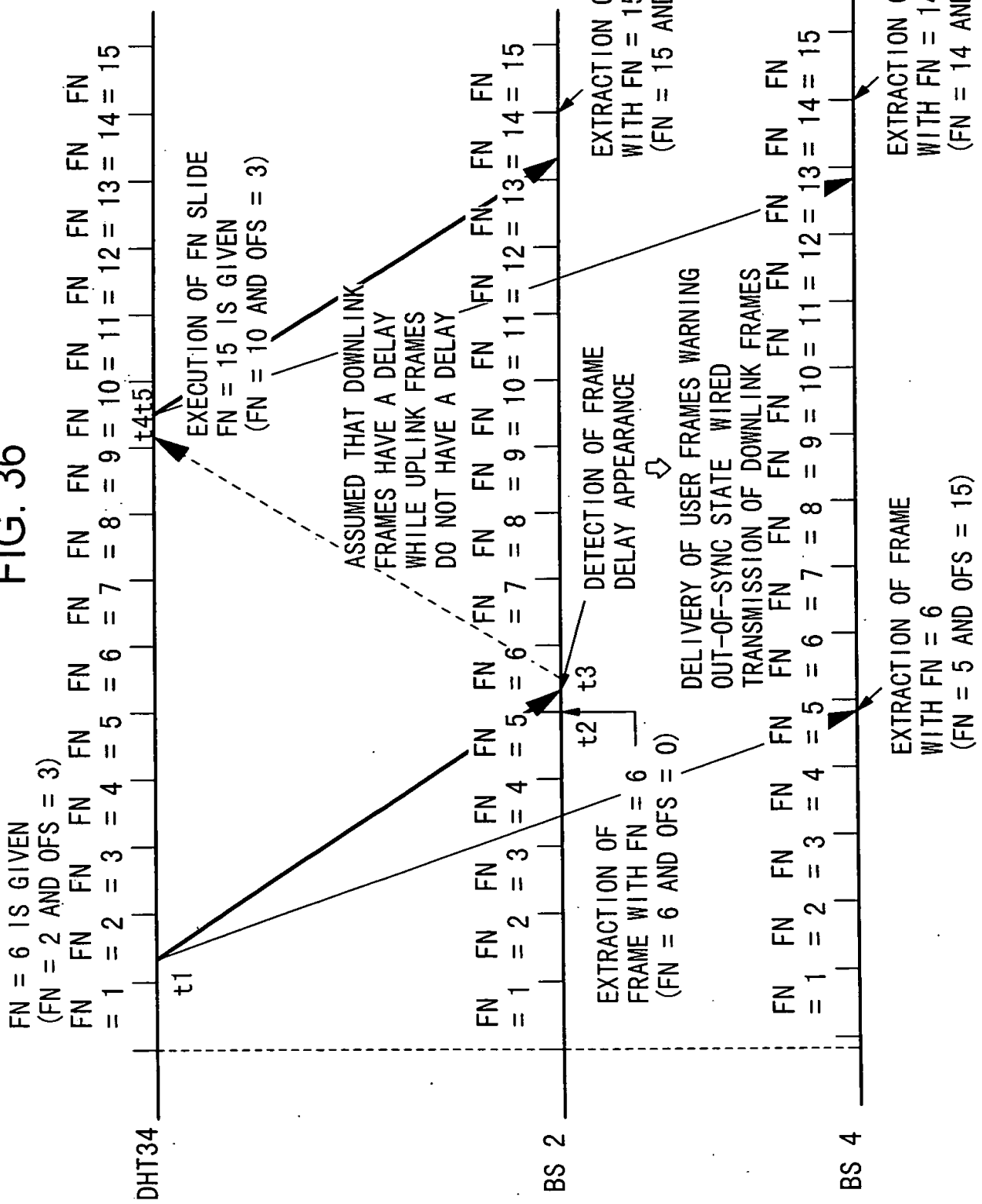

DHT34
BS 2
BS 4
FN = 6 IS GIVEN
(FN = 2 AND OFS = 3)
FN = 1 = 2 = 3 = 4 = 5 = 6 = 7 = 8 = 9 = 10 = 11 = 12 = 13 = 14 = 15
t1
t4t5
EXECUTION OF FN SLIDE
FN = 15 IS GIVEN
(FN = 10 AND OFS = 3)
ASSUMED THAT DOWNLINK
FRAMES HAVE A DELAY
WHILE UPLINK FRAMES
DO NOT HAVE A DELAY
t2
t3
DETECTION OF FRAME
DELAY APPEARANCE
EXTRACTION OF
FRAME WITH FN = 6
(FN = 6 AND OFS = 0)
DELIVERY OF USER FRAMES WARNING
OUT-OF-SYNC STATE WIRED
TRANSMISSION OF DOWNLINK FRAMES
EXTRACTION OF FRAME
WITH FN = 15
(FN = 15 AND OFS = 0)
EXTRACTION OF FRAME
WITH FN = 6
(FN = 5 AND OFS = 15)
EXTRACTION OF FRAME
WITH FN = 14
(FN = 14 AND OFS = 15)

FIG. 37

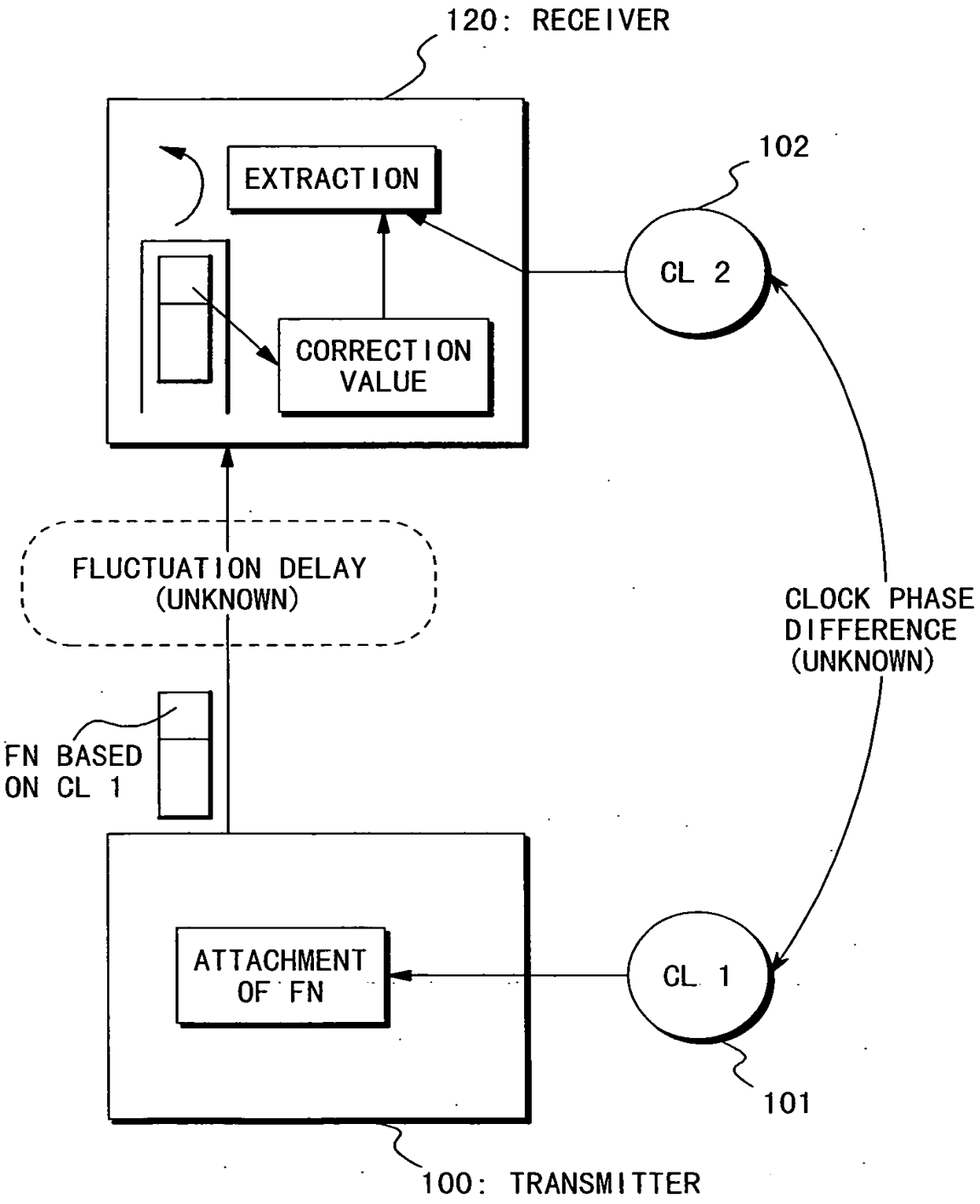

120: RECEIVER
EXTRACTION
CORRECTION VALUE
102
CL 2
FLUCTUATION DELAY (UNKNOWN)
CLOCK PHASE DIFFERENCE (UNKNOWN)
FN BASED ON CL 1
ATTACHMENT OF FN
CL 1
101
100: TRANSMITTER

FIG. 38

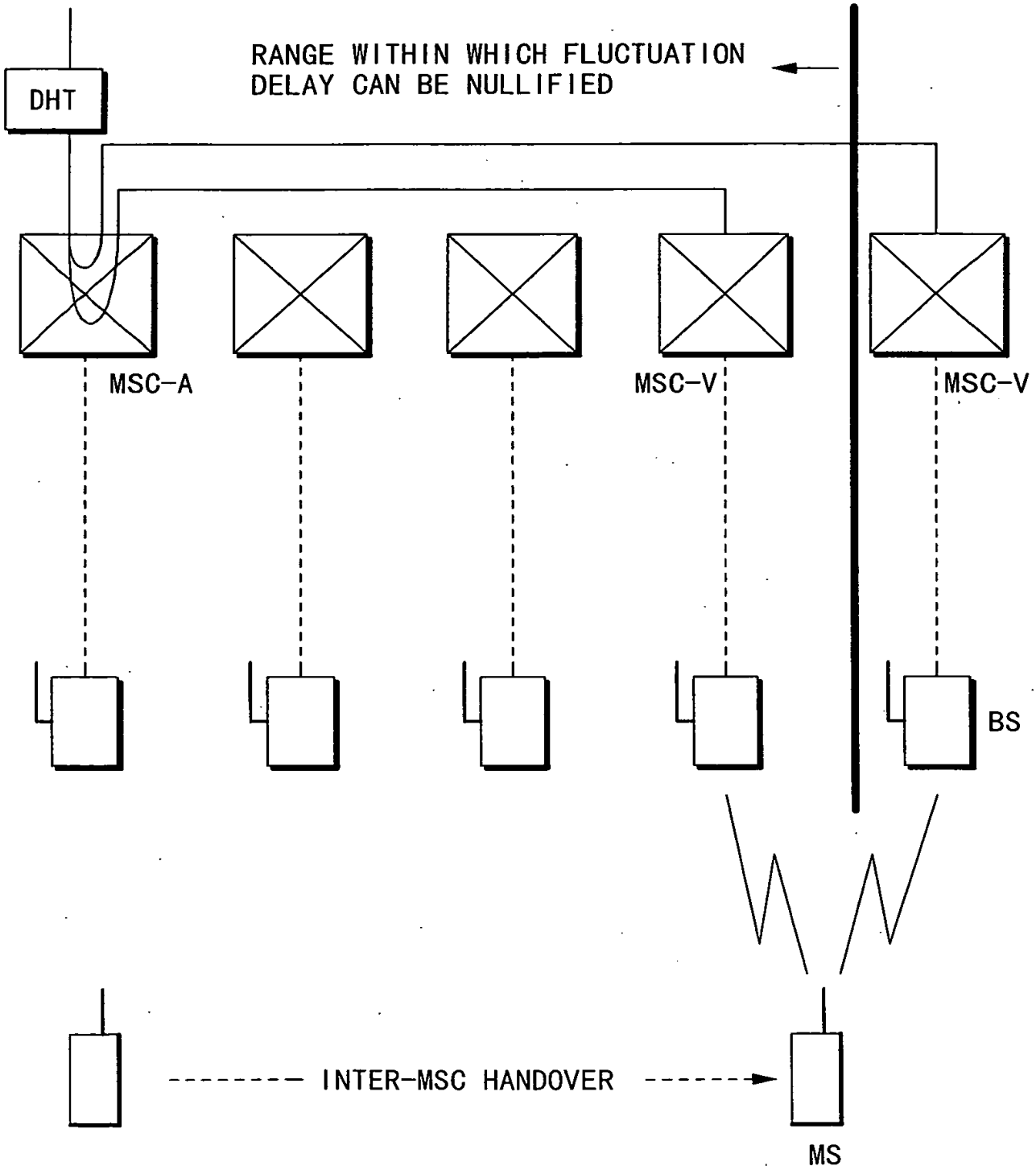
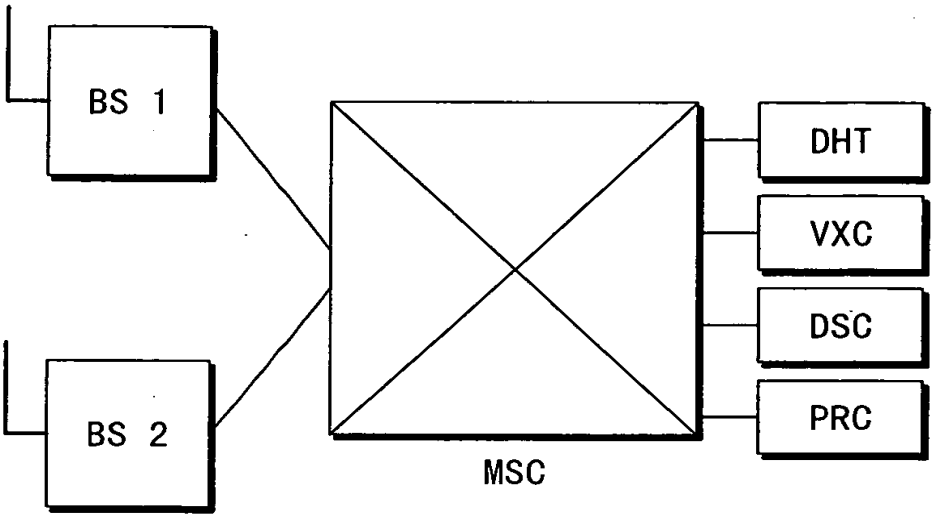
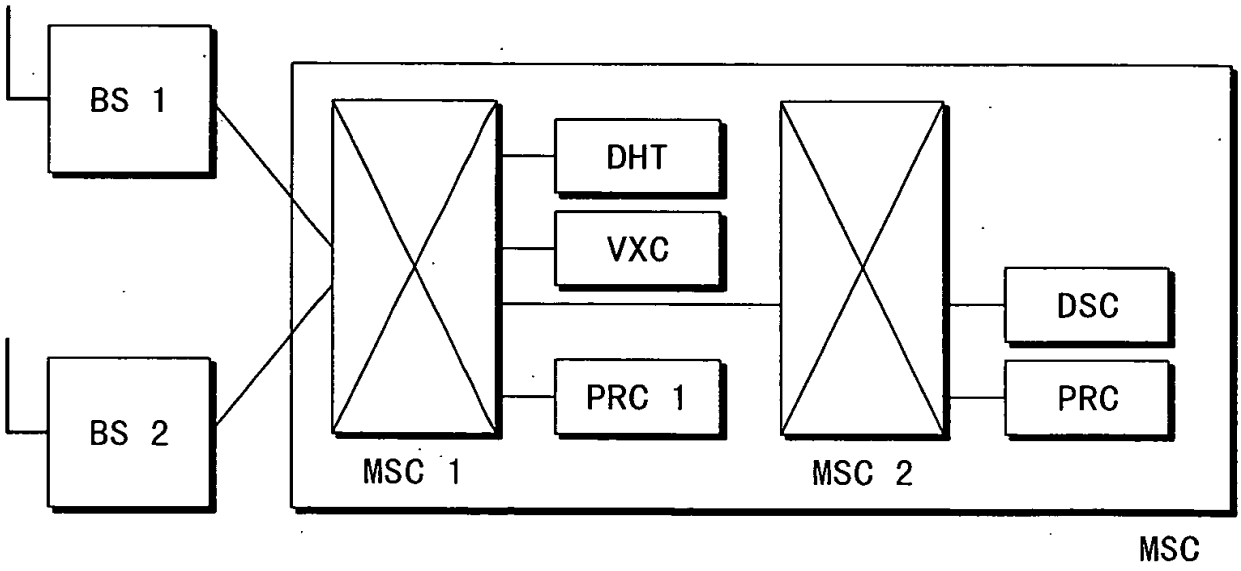

RANGE WITHIN WHICH FLUCTUATION
DELAY CAN BE NULLIFIED
DHT
MSC-A
MSC-V
MSC-V
BS
INTER-MSC HANDOVER
MS

FIG. 39

CASE 1



CASE 2



※ MSC 1 CAN BE LOCATED ADJACENT TO BS